

WY
K165
1879

THE SICK-ROOM.

SURGEON GENERAL'S OFFICE
LIBRARY.

ANNEX

Section -----

No. 113,
W. D. S. G. O.

No. 292123

3-513

THE SICK-ROOM

A Practical Manual on Nursing

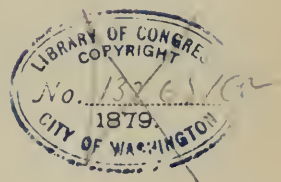
WITH A CHAPTER ON

THE DIETARY OF THE SICK.

By H. H. KANE, M. D.



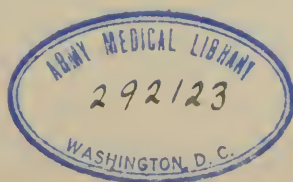
FIAT LUX.



NATIONAL PRINTING CO.,

Nos. 16, 18, 20 AND 22 CHAMBERS STREET, NEW YORK.

1879.



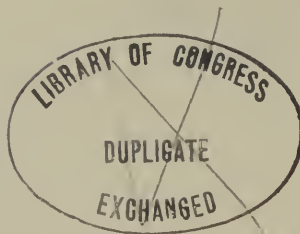
WY

K165

1879

F.11.2532. Item 6

Entered according to Act of Congress, in the year 1879, by
THE NATIONAL PRINTING CO.,
In the Office of the Librarian of Congress, at Washington.



PREFACE.

PHYSICIANS have always felt the need of a thorough knowledge of the principles and practice of nursing, by the people. So much depends upon such knowledge and its practical application, that the doctor always hails as a favorable sign, the presence of a good nurse in the sick-room. Being acknowledged by all as one of the principal factors in carrying a case to a successful termination, it seems strange that nearly all the knowledge in this pain-easing and life-saving branch of medicine should have found its only record in a sort of unwritten law, handed down from generation to generation; which, while in part excellent, is in the main vague, uncertain, and based upon any but scientific principles. Natural nurses, like natural doctors, are just those who would be specially valuable and efficacious, if their natural tendencies were developed and guided by study, and their knowledge based on facts. Without this, while they may be better than the average of the uneducated, they are still far from being what so important a matter demands.

The necessity for educated nurses has made itself

manifest within the last few years by the establishment and success of training-schools for their special education, in most of our large cities. From these schools come forth dexterous, gentle and competent attendants; an honor to their profession, a blessing to their patients, and a valuable aid to the physician.

There are many families, however, so situated that they are unable to employ these nurses, and many circumstances where, in the unavoidable absence of an educated attendant, a life may depend upon the practical application of a knowledge of nursing. For such families, and a better diffusion of this very important knowledge amongst the people generally, this little manual has been written. It does not aim to treat the whole subject, or any of its branches, exhaustively, but to give plain, concise, practical information on the many points where knowledge is lacking, or the views held are incorrect.

In addition to the results of actual personal experience in the sick-room, information has been gleaned from various trustworthy sources, whenever such information has presented itself in a specially terse and valuable form, or has come from the pen of a man peculiarly fitted to speak as an authority.

TABLE OF CONTENTS.

CHAPTER I.—THE PATIENT AND HIS SURROUNDINGS.

Location of sick persons room in relation to noise from street.—No such objection in country.—Importance of quiet.—How secured.—Size of room.—Number cubic feet of air for well person.—Number necessary for a sick person.—How to calculate number of cubic feet in room.—Low ceilings.—Lamp, fire and gas, consumers of oxygen.—Motion of air in room.—Why necessary.—No drafts.—Poisonous quality and augmentation of lung and skin secretion in disease.—Remarks on fresh air in sickness, by Sir J. Ranald Martin.—Velocity of air in a sick room not to exceed two and a half feet per minute.—Prof. Willard Parker's remarks on the poisonous qualities of expired air.—Popular errors in regard to taking cold.—Remarks of Sir J. Ranald Martin on temperature of the sick room.—Advantages of an open or grate fire.—Why a wood fire is sometimes best.—Moisture and absorption of organic matter by dishes of water.—Light and sunshine, importance of.—Air usually purer in third and fourth story rooms.—Objections to light on account of affections of the eyes—how to obviate.—The "blue glass" craze, why it did good.—Therapeutic value of light, Martin on.—The sunbath, how to take; to whom suited.—Ventilation, not draught; sun, not broiling.—Arrangement of sick room.—How to avoid dust in sweeping.—Removal of curtains, etc., in contagious disease.—Pictures and small ornaments—change in, pleasing to patient.—Plants and flowers in sick room, when allowable and when to remove.—Perfect cleanliness of room and attendants.—Flies, how to get rid of.—Appearance of the room as a whole.—The bed.—Mattress.—Springs, when allowable and when not.—Woven wire mattresses.—How to protect bed from wetting and discharges.—The "draw-sheet," how to make; objections to.—Frequent change of bed linen necessary.—Example of fever produced by dirty bedding.—"Parlor bedsteads."—Airing and warming of bed linen.—Amount of bed clothes.—Over-loading and over-heating injurious, save in special cases.—Fever patients unable to "take cold."—Sponging of fever patients.—How to bring out a rash when slow to come or absent.—Light in the room at night.—Cleansing and scenting of room.—Whispering objectionable.—Accurate spoons for giving medicine.—How doses of medicine are calculated in prescriptions, example of.—Variations in drops.—"Droppers."—Drinking ducks, advantages of.—Bed pans, porcelain, delf and rubber.—Rubber and glass urinals, cleansing of.—The nurse, cleanliness and good temper of.—List slippers.—Avoidance of questioning.—Natural nurses.—Physicians' orders to be taken down in writing and to be *exactly* followed.—Keeping record of

prominent symptoms.—Sample of urine to be saved.—Reaction to be taken; how to do this.—Nitric acid and test-tube.—The use of the thermometer.—The pulse in child-hood.—The discharge from the bowels to be saved.—Peculiarities to be noticed.—Disposal and treatment of in contagious disease.—Earth closets, advantage of.—Definition of contagion and infection.—Change and relief of nurses.—Tired nurses are tiring to patient.—Reading to patients, especially children.—Influence of mind over matter.—Momentary rising to prevent hypostatic congestion.—Woolen stockings on feet and legs in getting up to use chamber, etc.—Thirst an annoying symptom of fevers.—Drinks best calculated to allay.—Sucking ice.—An excess of water apt to disorder digestion.—Graves' fever drink.—Visitors, when to allow their presence.—A kind never to be admitted.—Methods for isolating persons with contagious disease.—Method of disinfection advocated by the National Board of Health.

CHAPTER II.—THE DUTIES OF THE SICKROOM.

BATHS, general remarks on—importance of a knowledge of—causes of variations in effects of—classification of. *The General Hot Bath*—its five actions—degree of temperature—weakening in disease—its primary action—how to excite delayed perspiration—length of time to obtain relaxant effect—relaxation better obtained by other means, where there is great weakness—an excellent means in strong patients; robust children with convulsions—time of immersion to obtain stimulant, revulsant, relaxant and eliminative effect—uses after exposure—pneumonia or pleurisy—kinds of congestion—how dissipated—"breaking up a cold"—why a good sweating should follow the bath—why the hot foot-bath is to be preferred—eliminative action of service in Bright's disease and rheumatism. *The Hot Foot Bath*—its common use in domestic practice—how it acts—how to be taken—to be put to bed and be well covered—importance of sponging off, the following morning—change of bed linen—use in suppression or absence of menses—sitz-bath usually better—uses in cholera infantum, infantile diarrhoea, dysentary and congestion, and inflammation of the brain—why mustard and salt are added. *The Cold Foot Bath*—when to use—for foetid and perspiring feet. *The Hip or Sitz Bath*, hot and cold—scale of temperatures—how to take—length of time to remain in—relaxant and sedative action, when desired—sweating afterwards, when best and when not—cold hip bath of service when—alternate cold and hot sitz-baths in delayed menstruation, &c.—when the hot hip-bath is to be followed by poultices. *The Sponge Bath*, hot and cold—actions—advantages of—uses in fever—as a soporific—in the night crowing of infants—how to give—ingredients that may be used—their action—the "sweating point"—how to dry the skin in eruptive fevers. *The General Cold Bath*—too severe a measure for the sickroom, unless under direction of physician—its use in England and Germany—action—how to give to nervous children—medicated baths useless, except in skin disease. *Sea Salt Bath*—action—to be followed by exercise. *The Douche*; *The Shower Bath*—points of difference—how to give douche—care necessary—of service in opium poisoning and chronic alcoholism—Emetics for opium poisoning—doses of mustard and ipecac—special bottles and boxes for holding poisons. *The Cold Pack*—*The Hot Pack*—essentially the same—how to give—action—local packs—

Ringer on superiority of packing over sweating by means of flannel clothing, &c. *Vapor Bath*—uses—utensils for—improvised apparatus—how to give when sitting—how to give mercurial or sulphur bath—care necessary to prevent inhalation of fumes—temperature scale for vapor baths. *The Hot Air Bath*—utensils for—how to use. *Dr. Nevin's Acid Steam Bath*—how to give—after treatment. *The Electric Bath*—how to administer—action of—the electro-magnetic bath—proportion o. ingredients of sea salt, bran, camphor, alkaline, glycerine, balsamic, sulphur and gelatine baths. **POULTICES**—general remarks on—ingredients; linseed meal, slippery elm (ground), browned corn meal, bread and milk, soap and sugar. **FELONS**—how to treat—how to make poultices—how to retain heat—when to renew—as producers of boils—anodynes on surface of—the charcoal poultice—how to make—charcoal as an addition to other poultices—how to make a yeast poultice—how to add carbolic acid to poultices—the uses of gauze and oil-silk in making—tobacco poultices—when and where dangerous—hop and chamomile poultices—when to use—glycerine in poultices—the onion poultice. **PLASTERS**—classification of—irritant plasters—mustard plaster—with flour—with vinegar—with white of egg—popular fiction regarding—mustard papers—Spanish-fly plaster—evil effects on children—as a producer of sloughing, congestion and inflammation of the kidneys and suppression of urine.—anodyne plasters—belladonna and stramonium plasters—protective plasters—of little use—kinds of—mechanical plasters—"Swansdown" and surgical. **BLISTERS**—how to produce—after treatment of. **CUPS**—kinds—description of—how to apply—mode of action—how to improvise a cup—domestic scarifier. **LEECHES**—where used—how to apply—how to promote bleeding from bites of—how to stop bleeding from bites of. **CROUP KETTLE**—how to improvise one—how to use. **JOINTS**—how to do up. **FOMENTATIONS**—hot and cold—how to use—receipts for. **OIL-SILK JACKET**—how to make. **MASSAGE**—meaning of—how to apply—use of. **INJECTIONS**—rectal—kinds—to be preferred to purgatives in great weakness—double action of—how to give—ingredients of—quantity of—kind of syringe best suited for—how to remove hardened faeces from the rectum—daily use of warm injections injurious—medicated injections—hamamelis and krameria in haemorrhoids—belladonna—opium—giving medicines by the rectum—proportion to be used—to kill worms in rectum—Ringer on—starch and laudanum in dysentery.—Nutritive Injections.—Of use, when—what to inject—how to prepare it—artificial digestion of it—defibrinated blood—beef essence. — *Ear Injections*—care in use of—proper syringe for. — *Nasal Injections*—kinds of—syringe for—dangers of—use in catarrh—atomizers better than syringe sometimes. **SUPPOSITORIES**—what they are—how to introduce—introduction by patient—local action of. **SURGICAL DRESSINGS**—things to have ready. — *Child-birth*—things needed at. — *Haemorrhage*—arterial, how to stop—venous, how to stop—cut throat, how to act.

CHAPTER III.—DIET FOR THE SICK.

The importance of the diet of the sick.—Why more attention has not been paid to it.—What the physician should know and do.—What the cook and nurse are expected to do.—Reference to books on diet.—Methods of cooking: broiling, baking, boiling, stewing, roasting, frying, infusing.—Importance of meat in the diet

of the sick.—Fried foods of all kinds objectionable.—Dr. Beard's ideas of frying.—Infusing—definition—how to accomplish—meats best suited for—to what cases suited.—When solid food is necessary.—Robust patients not to be overfed.—Broiling—its advantages—how to accomplish best—kind of fire best suited for.—Baking and Roasting—analogue to broiling—to what meats best suited—baked potatoes.—Boiling—Smith's remarks on—comparative value of boiled and roasted meats.—Stewing—advantages of—meat and vegetable stews.—Fatty foods—the role they play—objections to.—Experiments of Dr. Beaumont on Alexis St. Martin.—Tables thus compiled, showing the mean time of digestion of different articles of diet.—Manner of serving food—cleanliness—neatness—overcrowding.—The bed-table—how to improvise.—Some practical hints on kind and quantity of diet, by Sir. J. Ranald Martin.—Modifications from nature of disease, age, sex, previous habits and employments, and season.—Miss Nightingale on cooking.—Vegetables necessary in invalid diet.—Fats, objection to—butter the best kind of fat.—Ice-cream and beef.—Milk—importance of—idiosyncrasies regarding—how to obviate.—Sour milk.—Butter-milk.—Eggs—a good food—sometimes causing “biliousness”—egg-nog—how to boil—how to poach—amount of carbon and nitrogen in.—Arrowroot, rice, &c.—of use how—amount of starch in.—Bread—importance of—yeast and baking powders.—Cake.—Aërated bread.—Flours.—Fruits.—Grapes, peaches, water-melons, &c.—Meats—tables giving composition of.—How to determine the nutritive value of a food.—Their heat producing value—to what forms of disease fats are suited.—Beef extracts—valueless, as a rule—how to make liquid beef—Darby, of England, on.—“Desiccated beef.”—Fish—worthless as a brain food—how to cook.—RECIPES.—Soups, beef-teas, gruels, stews, &c.—Puddings, &c.—Meat, fowl and fish.—Creams.—Vegetables and fruits.—Jellies, &c.—Drinks.

CHAPTER I.

THE PATIENT AND HIS SURROUNDINGS.

FOR the first few days of an acute illness or a severe accident, it matters little to the sufferer what kind of a room he or she is in, or how the furniture or hangings are arranged, but it is a matter of considerable moment, affecting the patient's ultimate chances of recovery and his personal comfort, as to where that room is situated, especially if it be in a city. In the country, a front room is usually as free from noise as one in the rear of a house, and the situation of the apartment is therefore of less importance. In our large cities, however, the noise of the street-cars, the rumbling of butchers' carts and ice-wagons, the jangling bells of the rag-merchant, and the penetrating cry of the vendor of fruits or crockery, make a front room seem almost pandemonium to one whose suffering is intense, and whose nerves—to use an incorrect but expressive term—are highly strung, and ready to vibrate at a sound that would be unnoticed by a person in good health. In such cases, a room must be had as remote from the noise and confusion of the street as is possible. The room, further, should be large and airy. A person in good health should never sleep in an apartment with a capacity of less than 1500 cubic feet, and a sick person in one with less than 2000 cubic feet. Such a capacity is reached by a room fifteen feet long by ten feet wide and ten high (1500), and one twenty feet wide by ten long and ten high (2000). To obtain the contents of a room in cubic feet, multiply the length in feet by the breadth, and the result by the height. Rooms with low ceilings are always to be avoided where possible. They are not pleasant, light usually has no free entrance, the movement of air is restricted, and the heated air that should rise above the level of the person's head when standing, is brought close to his face when he is lying down. It must be remembered that the person acting as nurse, the fire—if there is one, as there always should be in

damp or cold weather—and the gas or lamp, are all consumers of oxygen, and consequently lessen the amount for the patient. The air should be constantly moving, in a regular, uniform manner, but not in unequal or direct currents or drafts. This motion is necessary to carry off the organic material thrown out by the lungs of the sick person, it being in disease greatly augmented and especially poisonous. Sir J. Ranald Martin, in an article on Hospitals, in *Holmes' System of Surgery*,* says, speaking of the value of fresh air :

“In Scripture, the atmosphere is termed ‘the breath of life,’ as indicating the vital properties of fresh air. So life-giving is pure air, indeed, that we must have it in excess of our actual wants, if we would insure that the air which we are inhaling may not be corrupted by the consumed air which we have exhaled; for, be it remembered, that no kind of impure air is more injurious to health than the impurity of air expelled from the lungs. Ample cubic air-space is important and necessary, but it, alone, will nowhere prove sufficient for health, without provision for the constant removal of exhalations from the lungs and skin of the sick.

“For thousands of years the natives of India have regarded purity of skin as obtainable only through the rinse of the river-stream, or through the imitation of it in the bath-room, by a constant stream of clear water poured from a vessel, the same water not applying to the skin twice. If we would enjoy a perfect respiration, with consequent purity of the blood, we must secure the same kind of rinsing or cleansing by a constantly succeeding supply of pure air for the supply of the lungs.

“The motion of air in any room should never exceed the velocity of two feet and a half per minute, and it should not at any time be much below that rate.”

Few realize how thoroughly a single pair of lungs can vitiate the air of a fair-sized room in the course of a few hours. In speaking on this subject before a class of students, at the College of Physicians and Surgeons of New York City, Prof. Willard Parker called attention to the matter very aptly, in the following words: “If, gentlemen, instead of air, you suppose this room to be filled with pure, clear water, and that instead of air you were exhaling twenty times a minute a pint of milk, you can see how soon the water, at first clear and sparkling, would become hazy and finally opaque, the milk diffusing itself rapidly through the water. You will thus be able to appreciate, also, how at each fresh inspira-

**Holmes' System of Surgery*. London: 1864. Vol. 4, p. 994.

tion you would be taking in a fluid that grew momentarily more impure. Were we able to see the air as we are, the water, we would at once appreciate how thoroughly we are contaminating it, and that unless there be some vent for the air thus vitiated, and some opening large enough to admit a free supply of this very valuable material, we will be momentarily poisoning ourselves as surely as if we were taking sewage matter into our stomachs."

Decided objection is made by many persons to free ventilation of the sick room on the score that there is great danger of "taking cold." In regard to this the following very sensible remarks of Sir J. Ranald Martin should be borne in mind:

"The danger of thorough ventilation is much exaggerated; for, excepting a few well known instances, the risks are hardly worth estimating as compared to the benefits of that life-spring to the sick—fresh air. Patients in bed are not generally inclined to catch cold. Catching cold while in bed follows the same rule as while we are up. If the atmosphere be foul, with the lungs and skin oppressed, and unable to relieve the skin by depuration, then a draught may bring a chill; but this is the fault of the foul air, not of the fresh. As regards temperature, trifling variations are in general rather beneficial than otherwise; and a cooler atmosphere at night acts rather as a tonic."*

In summer, one or both windows and the door should be open, the bed being so placed as to be out of any draught. A thermometer should hang near the bed, and in winter, the temperature of the room should not be allowed to rise above 70° F. Slight variations from 67° to 70° F. are immaterial, and are looked upon as favorable rather than otherwise by Martin, as already shown. An open fire burning in the room acts as a good ventilator and is bright and cheerful, the latter being a great desideratum. A wood fire, when it can be had, is to be preferred to one of coal, as less gas is given off. In winter, however, a more uniform temperature may be maintained by the coal fire. It is always well to have dishes of water standing about the room, as moisture is thus given off and much of the organic matter is taken up by the fluid, which acts as an air purifier.

In winter, it is well to make a frame to fit the space left by lowering the upper sash of the window, and tack a layer of flannel on each side of it. This admits and gives exit to the air, and at the same time prevents draft. This frame may be made in the same way as for mosquito-netting.

*Holmes' System of Surgery. Vol. 4, p. 1000.

Next in point of importance to fresh air is light and sunshine. If possible, the room should be so situated as to allow the sunshine to enter it for at least a few hours each day. Better risk the noise of the street, getting as far away from it as possible by going high up, where, by the bye, the air is usually purer and fresher than on the first and second floors, than to put a patient into a quiet room where light, air, or sunshine, are excluded. There is much organic material in the dust from the street—the finely powdered horse manure, &c.—that is constantly blowing into the first and second story windows. There are certain diseases where the eyes are intolerant of light, and where, if admitted freely, it would do decided harm. In such cases it is, of course, to be excluded for the greater part of the day, but even then it may be admitted for a short time by protecting the eyes of the sick person from its glare. It is a good plan to place the head of the bed towards the windows so that the light there entering may not strike directly in the sick person's face. A room can thus be kept quite light, even when the eyes would be intolerant of its direct rays.

In most diseases light will do no injury, and when properly borne is always of decided benefit. This is especially the case during convalescence. The "blue glass" craze was based upon the beneficial action of light; the blue glass simply offering an inducement, for persons who would not otherwise do it, to sit in the sunlight for several hours at a time. In this way, it undoubtedly did much good, but beyond protecting the eyes from glare, the glass might as well have been colorless as blue.

"Of all the elements which play a high part in the material universe, the light which emanates from the sun is certainly the most remarkable, whether we view it in its sanitary or scientific relations. It is, to speak metaphorically, the very life-blood of Nature, without which everything material would fade and perish." *

Sunlight is of especial benefit to persons convalescing from long and wasting sickness. They should take a daily sun-bath of an hour or more, as their strength permits. They may be placed with their backs to the sun if the glare hurts the eyes, or wear a pair of blue or green glasses for the same purpose. The patient should be wholly or partly nude, allowing the sun to act directly on the cutaneous surface. In all these cases a light-colored and light-weighted straw hat, well perforated at the sides, and slightly dampened, should be worn. It protects the head from the direct rays of the sun, which is important, as in

* Martin, *op. cit.*, p. 998.

weakly persons prolonged exposure might produce congestion of the brain or other serious trouble. We have understood that there is a large room on the top floor of the New York Hospital, in this city, for this especial purpose.

It must not be supposed from what has been said here that the author advocates the constant blowing of cold air over a sick person, or broiling him for several hours each day in the sun. The fresh air must be had only in proper quantity, not in excess. Convalescents or chronic cases only should have the sun bath; all patients, however, need sun in the room for a short time each day, except in special cases, which will be pointed out by the physician. It is to be borne in mind that air, light, and sunshine are Nature's great scavengers and disinfectants.

A few words may not be amiss in regard to the arrangement of the furniture of the sick room. As a rule, the paper should be light and pleasant to look at; the carpet should be bright and cheerful; and the furniture strong, well made and free from squeak and groan. As the carpet is apt to soil very soon, it is a good plan to put some light, cheap material upon it, especially near the bed, so that it can be daily raised and shaken, thus obviating the dust that will arise from a sweeping or "dusting up," however light it may be. When it can be done without disturbing the patient, or when there is an opportunity for arranging the room before it is occupied, the carpet should be taken up. It only serves to deaden the sound of footsteps—which can be much better done by requiring the nurse to wear list slippers—it is being constantly stained, catches all the dirt, and will serve as a medium of contagion in such diseases for weeks after the person has left the room. Furthermore, the bare floor can be thoroughly cleaned, without dust or noise. All "dusting" should be done with a damp rag. Too little furniture is better than too much in a sick room, especially if the room be small. In contagious diseases all curtains, hangings, books, and trinkets that can possibly be dispensed with, should be removed, and where curtains are needed, cheap paper ones that may be burned should be put in their place.

There are various little things, the doing and leaving undone of which add greatly to the comfort and contentment of the sufferer. This is especially the case with children. When well, they go from toy to toy, and play to play, constantly seeking something new and fresh. How monotonous must it be, then, for these little butterflies to be shut up, day after day, in a room that is always the same in furniture, hangings and arrangement. Sameness and the modified light are supposed by some to soothe irritation and induce

sleep. It is a great mistake. They may force sleep, but it will be fragmentary; and instead of soothing irritation, they often increase it. These remarks are, of course, subject to some modification in special diseases. There should be pleasant pictures and various little nick-nacks on the wall to attract the patient's attention and keep his mind employed. As he gets well, he will tire of these and they may be partly or wholly removed and others put in their place while the patient is asleep. His surprise and pleasure on awakening will well repay the trouble, and hasten his cure. A few growing flowers will be pleasant to the sight and smell. Cut flowers should never be allowed in a sick-room. *All plants and flowers should be removed at night*, for then the plants are throwing out carbonic acid gas and absorbing oxygen, while in the day time they exhale oxygen and rid the air of the poisonous carbonic acid. Patients rarely care for flowers before the period of convalescence.

Everything about the room, and those who enter it, should be scrupulously clean and neat. The table upon which the medicines are kept should have a clean white cover, and be placed out of the patient's sight. Glasses and spoons should be rinsed after each time of using, and wiped dry. Water is a good purifier of the air, and, of course, if the medicine is dissolved in water and that is uncovered, such medicine must absorb a vast amount of filth from the air of the sick room; it is safer when kept in corked bottles.

A piece of poisonous fly-paper should be placed in a saucer of water near each window. If, in spite of this, these pests are troublesome, a large-meshed mosquito bar may be put up over the patient. When it can be avoided, however, this should not be done, for the netting obstructs the person's sight, prevents a free circulation of air about his bed, and is in the way when a medicine is to be given. The whole room should have a bright, cheerful and tasty appearance. The eyes soon become weary from resting on the same dull surroundings day after day and week after week. Daily changes, however slight, are always agreeable.

The bed should be strong and well made, so as not to squeak or groan every time the sick person turns or is moved. In acute disease and long continued illness, the mattress should rest on good springs having an even tension. The woven wire mattresses of the Hartford Company are excellent both in health and disease. In accident cases, such as broken limbs, the bed should be strong and without springs, the mattress being laid directly on the slats or cording, the former being best. A spring bed, by allowing too free motion, might in some of these cases

interfere with the working of the apparatus which the medical man applies. The mattress in all cases, where it can be afforded, should be of hair, and well and evenly made.

In cases where there is a discharge from wounds, where the patient wets or soils the bed, or the applications made to the part are apt to soak into the mattress, it is well to put a fair-sized piece of rubber cloth beneath the sheet. Each time the sheet is changed, this can be dried and rearranged. The "draw-sheet" is, in some cases, a positive necessity; in others, a great nuisance. Where the sheet is being constantly wetted or soiled, a sheet may be doubled upon itself in its narrow diameter, several times, leaving enough free to place beneath the patient. The rest lies folded up at the back of the bed. As the parts beneath the person become soiled, he is gently raised, and a fresh part of the sheet drawn under him, by drawing forward the soiled part. This arrangement is called the "draw sheet" and is of value in that a dry surface can be kept constantly beneath the person, without raising him to put on a clean sheet. It is disadvantageous, however, in that it keeps the damp, soiled linen within a few feet of the sick person, who necessarily inhales the offensive odor.

It is best to sew one sheet to another, and as one is soiled, draw it out, thus pulling the other beneath him, and then, ripping out the stitches, remove the soiled sheet altogether. Another form of "draw-sheet," much used in hospitals, is made by folding a narrow sheet down its length once, then folding it across several times, leaving a part sufficiently wide to go beneath his buttocks. This is put under the patient over the regular sheet and is drawn forward in the manner spoken of before. This is of course open to the same objections as the other, and either, if used at all, should only be used when a patient is so very low that any movement necessary to change sheets is hazardous or weakening. In any case, the plain sheets stitched together are best. In all cases of prolonged illness, it is well to have a sheet doubled once in its length and laid across the bed with the ends tucked in at each side of the mattress. This will not wrinkle in the same manner as the single sheet, and can be readily kept free from crumbs. When soiled, it can be removed and another put in its place by sewing the end of a clean one, so folded, to the end of the soiled one and pulling it through.

As a general rule, bed-linen should be changed every other day. It is as important to have clean linen next to the skin as to have fresh air for the lungs, as is shown by the following:

Sir J. Ranald Martin* quotes Dr. Rollo as saying that "cleanli-

* Martin, *op. cit.*, vol. 4, p. 998.

ness of the patient and of everything about him, is indispensable." "To illustrate his subject, Dr. Rollo says that in 1789, several men of the artillery at Woolwich, were seized with a severe form of continued and relapsing fever. These men were found to have occupied beds different from the rest of the barracks, having hammock bedding. The hammocks were rolled up tightly every morning the moment the men rose, and they were unloosed when they went into them at night; and this time we had so much and so constant rain that this bedding had not been aired or opened for a single day for at least two months. The hammocks were, with their bedding, examined, and the moment they were opened, a very peculiar nauseating smell was perceptible. Steps were immediately taken and no further mischief took place. Here, an infectious fever evidently arose from the confinement of the effluvia of a man's own person in a time of about two months."

Many families are daily imitating the performances of these soldiers by shutting up their bedding in "parlor-beds," so called. In the case of sick persons such shutting up of effluvia does not take place to the same extent, but as the matter passing from the lungs and skin is materially increased both in amount and poisonous quality, a daily change is imperative. All clean linen should be aired for at least two hours each day before being put on the bed, and whether in winter or summer should be warmed before a strong fire for half an hour. There must not be the least trace of dampness about it. A recent writer in *Scribner's Monthly* (September, 1879) gives some very good directions as to how bed and body linen are to be changed in the most rapid and easy manner:

"The bed linen should be changed at least once in three days; the blankets once a week, those that have been removed being hung in the open air for a few hours, then thoroughly aired in a warm room, and put away to replace those in use, which should be similarly treated.

"In changing body linen, have the fresh garment aired and close at hand; let the arms be drawn out of the soiled one, slip the clean one on quickly over the head, and by the same movement draw it down and remove the other at the feet.

"Nothing is more easy to an experienced nurse, or more difficult to an inexperienced one than to change the bed linen with a person in bed. Everything that will be required must be at hand, properly aired before beginning. Move the patient as far as possible to one side of the bed, and remove all but one pillow. Untuck the lower sheet and cross sheet and push them towards the middle of the bed. Have a sheet ready folded or rolled the long way, and lay it on the mattress, unfolding it enough to tuck it in at the side. Have the cross sheet prepared as de-

scribed before, and roll it also, laying it over the under one and tucking it in, keeping the unused portion of both still rolled. Move the patient over to the side thus prepared for him, the soiled sheets can then be drawn away, the clean ones completely unrolled and tucked in on the other side. The coverings need not be removed while this is being done; they can be pulled out from the foot of the bedstead and kept wrapped around the patient. To change the upper sheet, take off the spread and lay the clean sheet *over* the blankets, securing the upper edge to the bed with a couple of pins; standing at the foot, draw out the blankets and soiled sheet, replace the former and put on the spread. Lastly, change the pillow-cases."

Sick persons are to be overloaded with bed-clothes *only* when free perspiration is desired. In all other cases the covering should be just sufficient to keep the person *comfortably* warm. It should be remembered that it is almost impossible for a person with a high fever to take cold, and that, therefore, unless a free sweating is aimed at, a heavy pile of blankets and "comforters" are positively hurtful. They irritate the patient and render him restless by reason of their weight and the increased heat. Many persons in attendance on the sick wonder why the fever keeps so high, when all the time they are producing more heat and preventing that of the body from leaving it by using too many and too heavy bed-clothes.

To persons suffering with a high temperature, sponging off several times daily in lukewarm or cool water is very agreeable, and often materially lessens the fever and induces a pleasant, healthy sleep, sometimes followed by free perspiration. This sponging will never do any harm and is so agreeable that patients request it again and again. No bad symptoms follow its use even in the eruptive fevers, (scarlatina, measles, &c.) after the rash is well out. During the first few days, a table-spoonful each of mustard and salt, with a little spirits, say two ounces, to a wash-bowl half full of warm water, will bring the rash out fully and allay the intense itching which is often so annoying. Sponging with water and dilute acetic acid is often very grateful, allaying the troublesome itching of the eruptive fevers, keeping out the rash, and hastening desquamation. It should be used of the strength of one part of *dilute* acetic acid to ten parts of water. A table-spoonful of spirits of camphor to the wash-bowl of water is also of use to allay itching. Where there is no itching and the rash is well out, and in other than eruptive fevers, the water may be lukewarm or cool, and the mustard and salt omitted. A fine soft sponge or cloth should be used, one part at a time being rapidly sponged and as rapidly dried. The patient should be wrapped

in a blanket while this is being done. After each sponging the patient's hair should be dampened, dried, and then so arranged as to be kept off the face and out of the eyes. In females it is well to do it up in *two* braids. The patients back should be examined daily to see if any of the prominent points are reddened. When found to be so they should receive immediate attention, for it is thus that bed-sores commence. The part should be bathed several times daily with the following mixture, then thoroughly dried and powdered with pulverized oxide of zinc:

Alum.....	2 drachms.
Tannic Acid.....	1 drachm.
Alcohol.....	8 ounces.

These prominent points, which are very prominent and numerous when a patient is emaciating fast, should be protected by making little rings of cotton, and so placing them that the reddened or excoriated part shall fall into the hollow, and be thus relieved of all pressure. These rings may be made to keep their shape better by stitching the cotton through and through into string or cord.

Vaseline is a reliable and elegant preparation, that is of great service in healing excoriations and a decided allayer of irritation and itching. It is free from the objections so justly urged against oils and fatty salves—their getting rancid.

At night a light should always be kept burning *in* the room, especially in the case of children or nervous women, for waking in the dark often gives them a fright. They seem to sleep quite as well, some, indeed, better with than without a light.

Any unpleasant odor about the room should be treated with plenty of fresh air and the burning of a piece or two of cascarilla bark, which is much better than the pastiles sold in the shops. After each burning the window should be opened and the air allowed to circulate freely, the patient being, of course, well covered.

Whispering in a sick-room is always objectionable. This tone of voice is penetrating and more annoying to the sufferer than that of ordinary conversation. The words in the whispering tone are just indistinct enough to excite the patient's curiosity and cause a straining and tension in the endeavor to catch their meaning. It is to be borne in mind that conversation in any tone should be limited to the absolute necessity of the case. These remarks will, of course, be understood to apply only to severe cases of acute illness and before convalescence.

Physicians in ordering medicine generally specify the dose of fluids

by the tea-spoonful, that being supposed to represent one drachm. Upon this basis, the dose of each of the ingredients of the mixture are calculated,* and if the spoon holds more or less than the amount specified, the dose is more or less altered. It is well, therefore, to obtain one of the porcelain or glass spoons for sale in the drug stores, they being correct and consequently reliable. It is not always necessary that a tea-spoon should hold just one drachm of fluid, for a few drops more or less will make but little difference, but it is sometimes imperative that it should; and if we are accurate always, we are sure of suffering from no mistakes. Where medicine is to be given by drops, the little glass "droppers" of the drug stores are inexpensive and invaluable. It must be remembered that drops vary much in size, this variation being due to different causes, as the size of the neck of the bottle, the density of the fluid, etc. For administering drinks and fluid foods, the porcelain "duck" is very useful. The patient does not have to be raised, and its narrow neck prevents a too rapid flow of fluid into the mouth (Fig. 1).

Fig. 1.



PORCELAIN DUCK.

Another great convenience in the sick room and one that obviates sitting up in or getting out of bed, is the bed-pan. The porcelain or delf

*Take the following as an example :

Tincture of Nux Vomica.....	160 drops.
Tincture of Opium.....	1 drachm.
Syrup of Wild Cherry Bark.....	1 ounce.
Water, add to make.....	4 ounces.
Mix.	

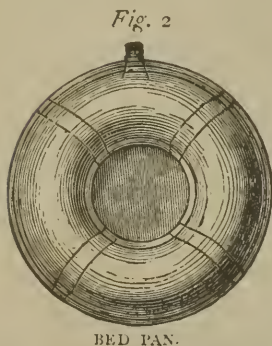
Take a tea-spoon-full every day.

This is a four ounce mixture. There are eight drachms to the ounce, therefore thirty-two drachms in all (4 times 8) or thirty-two tea-spoonsful. The amount of each ingredient in a tea-spoonful, then, would be one $\frac{1}{32}$ of the amount placed opposite the drug, as:

Nux Vomica, $\frac{1}{32}$ of 160 drops.....	= 5 drops.
Opium, $\frac{1}{32}$ of one drachm (60 drops) = $\frac{60}{32}$ of a drachm or $1\frac{7}{8}$ drops.	
Wild Cherry, $\frac{1}{32}$ of 1 oz. (480 drops) = 15 drops.	

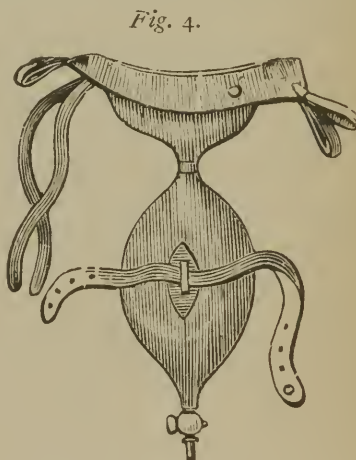
Adding these together we have $21\frac{7}{8}$ drops which would leave us the rest of the tea-spoonful, or $38\frac{1}{8}$ drops, consisting of water.

article, however, is at best clumsy, hard and unmanageable. A very elegant affair is made by the Goodyear Rubber Company. It is known as the "Inflatable Bed-Pan." It is made of rubber, is put under the patient readily, is easily cleansed, and less objectionable than those in use as it has no cold surface or hard, sharp edges. It is to be inflated before each time of using. It has all the advantages of the solid pan and none of its drawbacks (Fig. 2).



In inflammation of the bladder, and other disease where there is a spurting or dribbling of urine that is almost continuous, the rubber urinals made by the same firm will be found very convenient (Figs. 3, 4 and 5).

For occasional urination the small glass or porcelain urinal will be found very serviceable. Those of glass are better than those of porcelain, as



RUBBER URINALS.

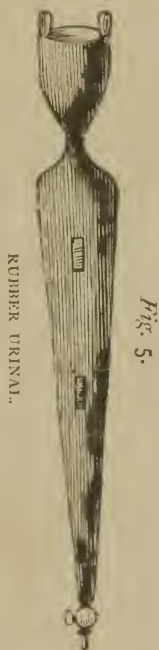
their cleanliness can be readily determined. They should be washed with hot water and suds after each urination.

In lung, bronchial and throat affections, where there is considerable expectoration, the "spit-cup" is a great convenience, preventing straining and concealing the sputa from view. This latter is important to persons who are subjected to nausea.

The person who acts as nurse should be of a kind, gentle disposition,

of unvarying temper, patient and strong. He or she, it is usually the latter, should have a quick ear, a sharp eye, and be *very* neat and clean in person and dress, for nothing worries a patient, himself cleanly, so much as a nurse with dirty hands or face, unkempt hair, or careless dress. A clean, white apron and white cap add much to her neat and pleasant appearance. She should wear slippers, preferably of list, and should never do anything hurriedly or by jerks. When not busied about the patient, she should have some little piece of work in her hands. It looks better and keeps her in better spirits than sitting idly, gazing at the patient or out of the window. She should not annoy the sufferer by constant questions as to what he will have; this practice renders the patient fretful and restless. The true nurse can readily see and anticipate a wish without catechising.

Temperature.—"Taking the temperature" of a sick person by means of the thermometer is a comparatively recent advance in medicine. By its use the exact amount of bodily heat is readily ascertained, and important evidence is thus furnished to the physician. In a very sensible and well written little book upon the subject, especially designed for the people, Dr. E. Seguin, of this city, commends the use of the thermometer in every family. The mother is thus enabled to determine in a few moments whether her child is suffering with any fever, and whether the doctor should be sent for. She will often recognize the approach of a serious illness some days before there is a distinct outbreak of the disease, and by the advice of her physician possibly ward it off. The use of the thermometer is, therefore, very important. It is of service, also, and more commonly employed, to record variations in temperature when



RUBBER URINAL.

Fig. 5.

Fig. 6.



A SELF-REGISTERING FEVER THERMOMETER.

a person is sick, and every nurse or attendant should become proficient in its use, and keep a record of her observations for the inspection of the physician at each visit. A thermometer such as is used for this purpose is here shown (Fig. 6).

The temperature of a healthy person is about $98\frac{1}{2}^{\circ}$ Farenheit.* Anything above 99° indicates fever and should be attended to at once. Temperature below 98° indicates collapse. A recent English writer † says, "No indication is more simple or more valuable than that supplied by the thermometer; by its aid alone we are often led to suspect the advent of typhoid or scarlet fever, or to detect some latent pneumonia or tubercle producing irritation, or worms or some other malady which we had overlooked. * * * Temperature is a better guide than the pulse in the diseases of young children, and should be used to correct its indications."

The method of taking the temperature is as follows: Holding the thermometer, which should be self-registering, in the right hand, hit that hand against the palm of the left until the little registering line of mercury is at or below 90° . Then place the bulb under the tongue, in the armpit, or in the vagina or rectum. In infants and children, the rectum will give the most reliable results, for children are apt to break or drop the instrument when in the mouth, or fail to keep the arm folded firmly across the chest, when in the axilla. The armpit should be wiped dry before introducing the thermometer. The thermometer should be left in place three minutes. It is to be borne in mind by nervous and anxious mothers, that the temperature of their little ones, when ill, sometimes rises out of all proportion to the gravity of the disease. It may be well to remark here that the pulse ‡ in infancy and childhood is very different from that of adult life. "The pulse varies from 110 to 150 consistently with health; it may be irregular consistently with health. It is rather quicker in the female than the male after seven years; it is somewhat slower during sleep. A very slow pulse is an indication of cerebral (brain) disease.

Table of the Pulse (Müller). §

At birth	130 to 140	3d year	90 to 100
1st year	115 to 130	7th "	85 to 90
2d "	100 to 115	14th "	80 to 85

* So wonderful a piece of mechanism is man, that at all seasons of the year, and in all countries, the very hot and the very cold, the temperature of the body in health is always at about 98° .

† Edward Ellis. *Diseases of Children*. New York: 1879. P. 3.

‡ The pulse (from *pello*, *pulsus*, to drive, to beat, or strike) is not a peculiar something that is found at the wrist only, as some suppose, but is nothing but the beating or pulsation of any artery; that at the wrist being usually chosen because it is superficial and easy of access.

§ Ellis, op. cit., p. 4.

As soon as taken, the temperature should be recorded, for these little matters slip the mind. The temperature is usually taken by the physician, twice a day, morning and night. When necessary, however, it may be taken by the nurse, at noon also, and during the night if the patient is awake. Aside from their immediate value to the physician, these records may prove of the utmost importance in the study and advancement of medical science.

The physician's orders, when many, should be taken down in writing and should always be followed *exactly*, whether the nurse understands their reason why, or not. This is imperative. The nurse should keep a record of all the prominent symptoms occurring between the physician's visits. A sample of the urine should be saved in a clean two or four ounce bottle for his inspection, and the nurse should determine its reaction *just after it is passed*. This is of more importance in some diseases than in others; as for instance, rheumatism and inflammation of the bladder. Ten cents worth of litmus paper, red and blue, should be had from the drug store, cut into strips $\frac{1}{4}$ in. wide by $1\frac{1}{2}$ inches long and placed in separate, well-stoppered, wide-mouthed bottles. These bottles are to be kept securely corked. A piece of the blue paper is to be immersed half way in the urine for a moment, and if the urine be acid the paper will be turned red. If the blue color remains unchanged a piece of the red paper may be immersed in the same manner, when, if the fluid be alkaline, the red will be changed to blue. If no change is produced in either paper, the urine is neutral. These test-papers should be saved for the physician's inspection. A four inch glass test-tube should be on hand in case the doctor wishes to boil any of the fluid; also a small phial of nitric acid.

The discharge from the bowels, in case there is anything unusual about it, should be set aside, well covered, in a neighboring room, subject to the doctor's inspection. If not saved, the prominent points should be noted—viz., quantity, consistence, number of passages, color, odor, whether containing blood or mucus, and whether these latter coat or streak the stool, or are intimately mixed with it. In contagious* or

* "In this connection the terms infection and contagion may be defined. These terms have been and still are used without much precision as regards the relative signification of each. They are often used as synonyms. The definitions of different writers do not agree. It is not easy to settle upon definitions which are in every respect satisfactory. The term contagion, in its etymology, implies communication of a disease by contact. If, however, the sense of the term be extended by considering that the contact may be immediate or mediate, it may embrace all modes of communicability, including emanations, the medium of contact, in the latter, being the atmos-

infectious diseases, the stool should be passed into a chamber containing some disinfecting fluid. It should be remembered that the active poison of typhoid fever rests mainly in the alvine discharges. These should, consequently, be thoroughly disinfected before being thrown out. Indeed it is best to pursue this plan in all cases. The small earth closets, such as those made by the Bloomfield Co., are especially convenient for the sick-room. Dry disinfectants can be used in the hopper, and the pan emptied after each stool. They have the further advantage of obviating the strained and uncomfortable position necessary in using the chamber. This applies, of course, only to those patients who are strong enough to rise from bed, and to convalescents who are too weak to reach the water closet in city houses, or fear exposure to cold in country privies. The author's views on the subject of privies in country towns may be found in the *Public Health*, for July 12th, 1879. †

In case of acute disease where the nursing is likely to be prolonged for many weeks, the nurse who has charge during the day, should be relieved in the evening, in order that she may be enabled to take the air, and sleep. It is poor policy to overwork a nurse, or allow her to overwork herself, however willing she may be, for in a few days she becomes tired and jaded and is able to do her work but poorly. Let one in the family do all the day nursing and another all the night nursing for a week, and then change about. Both, in that way, get their required amount of sleep and bring fresh bodies, bright faces and clear heads to their task. A tired nurse, aside from doing her work imperfectly, is a positive source of irritation to a patient.

When the stage of convalescence has been reached, or if the disease be not acute, the patient's mind may be pleasantly occupied, and his thoughts taken away from his surroundings and suffering, by the occasional reading of a pleasant story or magazine article. Children are especially fond of fairy tales, and so many really excellent ones are to be

phere. If it be desirable to give a precise definition to each term, *contagion* may be restricted to the communication of a disease by means of a virus contained in a palpable morbid product, viz., serum, lymph, pus, or solid matter. On the other hand, *infection* may be used to denote communication by means of an inappreciable emanation or miasm. With this use of the terms, some diseases are propagated by contagion alone—for example, syphilis; some by both contagion and infection—for example, small pox; and others by infection alone—for example, pertussis or whooping cough. It is, however, customary and convenient to treat of the diseases which are diffused exclusively by infection (scarlatina, typhus fever, etc.) as contagious diseases. Moreover, the term infection is often applied to miasms which do not contain a virus."—FLINT *Practice of Medicine*. Phila.: 1873. P. 97.

† Privies and Water Contamination in Country Towns.

obtained that it is well to gratify this taste. A mind pleasantly occupied and entertained will carry the body a long stride towards health. The influence of mind over matter will bear even closer study than it has had.

Patients who lie for a length of time upon the back always have more or less congestion of the posterior portion of the lungs. It is well, therefore, to insist on their sitting up several times a day, for a few minutes, and taking a number of full, deep inspirations. A rope hanging from a staple in the wall, with a cross piece at the lower end, facilitates this rising and also turning in bed. This congestion is termed *hypostatic*, and means the settling of blood in a part from gravitation alone.

In case the person is allowed to get up on the chamber, or sit in a chair by the window, it is well to draw on a good pair of warm, woollen stockings that shall reach to the knees. Colds are usually caught during convalescence by exposure of the feet and legs. These parts of the body are farthest from the centre of circulation—the heart—and when heart power is decidedly lessened, they are especially susceptible to variations of temperature.

Thirst is a very prominent and annoying symptom of fever, and one that requires a little consideration. Plain water, when taken beyond a certain amount, is very apt to disorder the stomach and bowels, especially in fevers where much fluid and but little solid food is taken. Enough water to quench the thirst would certainly be enough in most cases to disorder digestion, or rather, further disorder it, and so important is the little that remains of this function that we cannot afford to abuse it. Small pieces of ice held in the mouth, and allowed to dissolve, sometimes answer the purpose, but not in the majority of cases. Up to a certain point, the action of water taken internally, in fevers, is excellent; aside from allaying irritation by quenching thirst, it flushes the kidneys, carrying off much of the effete material produced by the high temperature. It has been found that the addition of certain substances to water greatly increases its powers to quench thirst. This is especially the case with acids. One drachm of hydrochloric acid added to a quart of water will give it sufficient acidity to accomplish the desired purpose, while at the same time, it adds to its pleasantness, and sometimes relieves nausea. The use of acids in fevers is highly commended by some authors, and this is, I think, the best way in which to administer them. The same amount of sulphurous acid may be added to a quart of water when the bowels are loose or there is a tendency that way. In these cases acidulated barley water is pleasant and nourishing. The same may be said of toast water. In constipation, oatmeal water may be

used in the same manner. A few tamarinds added to a glass of water will often assuage thirst and open the bowels gently.

Ringer,* speaking on this subject, says: "Although, perhaps, not strictly relevant to our present subject, a few remarks may be made here conveniently on the drinks best suited to fever patients. To them, thirst is most important and distressing, often causing much restlessness and irritability, these in their turn often increasing the fever. The urgent thirst must therefore be allayed, but if left to themselves to satiate their craving, patients will always drink to excess, which is very liable to disarrange the stomach, impair digestion, produce flatulence and even diarrhœa. Theory and experience both show that drinks, made slightly bitter and somewhat acid, slake thirst most effectually. A weak infusion of cascarilla or orange peel, acidulated slightly with hydrochloric acid, was, with Graves, of Dublin, a favorite thirst-allaying drink for fever patients. Raspberry vinegar is a useful drink. Sucking ice is very grateful. Sweet fruits, although at first agreeable and refreshing, must be taken with care and moderation, for they often give rise to a disagreeable taste, and are apt to produce flatulence and diarrhœa."

I have not found the Graves' mixture so agreeable to patients as I was led to believe I should from its hearty commendations by many medical men. Flint† makes a very good suggestion, as follows: "The patient may be allowed to take into the mouth small pieces of ice, almost *ad libitum*, and for young children, a convenient plan is to confine pieces of ice in a gauze bag, which may be held in the mouth."

During acute disease and convalescence, care should be taken to keep the room free from visitors, especially strangers. The effort required to converse is very wearying to the patient, and the sympathetic looks of friends and strangers are often annoying.

"Visitors 'with faces twenty-six inches long,' as one has quaintly expressed it, should forever be excluded. Such, ever predicting evil, relating cases known to them, which of course proved fatal, with saddened visage, morose and peevish, constitute continued pestilence, a moral sirocco, a pestilential miasm, and should be as carefully forbidden entrance as the small pox patient. Such domestic lepers may have their uses, but certainly are not needed in the sick room; and yet they will thrust themselves upon the sick if allowed to do so, since in the sick room they can find room for their morbid appetites; they seek it as the vulture scents the carrion. On the contrary, the genial, hopeful, amia-

* Ringer. Handbook of Therapeutics. New York: 1875. P. 2.

† Flint. Practice of Medicine. Phila.: 1873. P. 990.

ble, the true friend who will sit by the bedside with a sunny face, asking no questions, making no conversation that demands answers, holding the hand of a friend and soothing the sick one, may be admitted at almost any time. Such can cheer, animate, encourage, and really sustain, and may be of great service to the sick.”*

In the case of contagious or infectious disease, the greatest care should be taken to establish and maintain isolation. The patient should be put in a large, airy room, as far distant from the sleeping-rooms of the other members of the family as is possible. Those in attendance on the person so affected, should, when obtainable, have a room near to or next that of the patient, and there eat and sleep. Daily exercise in the open air should be taken by the nurse or nurses. All dejections should be passed into disinfecting fluid, and the clothes and bedding be washed in the same, separate from those of the rest of the family. Dishes of disinfecting fluid should be set about the room and in the hall-ways. I give here the report of the commission of experts appointed by the National Board of Health to prepare a circular embodying judicious instructions for disinfection: “Disinfection is the destruction of the poisons of infectious or contagious diseases. The disinfectants to be used are:—First, roll sulphur, for fumigation; second, sulphate of iron (copperas), dissolved in water in the proportion of $1\frac{1}{2}$ pounds to the gallon, for soil, sewers, &c.; third, sulphate of zinc and common salt, dissolved together in water, in the proportion of four ounces of salt to the gallon for clothing and bed linen. In using disinfectants in the sick room the most available agents are fresh air and cleanliness. The towels, clothing and bed linen should, on removal from the patient and before they are taken from the room, be placed in a pail of the zinc solution, boiling hot if possible. All discharges should either be received in vessels containing copperas solution, or should be immediately covered with copperas solution. Fumigation with sulphur is the only practicable method of disinfecting the house. For this purpose the rooms must be vacated. Heavy clothing, blankets, bedding and other articles which cannot be treated with zinc solutions should be opened and exposed during fumigation. Close the room as tightly as possible, place the sulphur in iron pans supported on bricks contained in tubs containing a little water. Set it on fire and allow the room to remain closed for twenty-four hours. For a room about ten feet square at least two pounds of sulphur should be used. Cellars, yards, stables, gutters, privies, cesspools, water-closets, drains and sewers should be treated with copperas solution. It is best to burn articles which have come in contact with sick persons.”

* Good Words, July, 1856.

CHAPTER II.

THE DUTIES OF THE SICK ROOM.

THERE are many things to be done in a sick-room, the proper and easy performance of which adds much to the patient's comfort, and hastens his convalescence. A bungling or ignorant nurse does positive injury continually. The present chapter is devoted entirely to a description of the various agents employed, and the method of preparing and applying them, with a few, necessarily limited, remarks on the *rationale* of their action.

BATHS.

GENERAL REMARKS.—When fully understood, the uses to which water, in the form of baths, may be put in the treatment of disease, are as valuable as they are various. I say *when fully understood* for the reason that the majority of people do not have correct ideas upon this subject. Knowledge is important, and ignorance dangerous, from the fact that while a very valuable means of curing disease and alleviating suffering, baths are quite as powerful agents for evil, when used at improper times or in unsuitable cases. The effects of a bath, especially in disease, vary greatly with the temperature of the bath, the amount of fluid used, the time at which it is given, the time occupied in its administration, and whether the whole or only a part of the body is immersed. When a clear idea of the principles involved is had, various modifications may be made to suit special cases and conditions. The following classification presents, as fully as is possible to present in any classification, the main actions of the various forms of baths. It is to be borne in mind, of course, that a bath will vary in its effect according to duration. For example—a momentary shower bath is stimulant, a prolonged one, sedative.

General Hot Bath	{	Relaxant.
		Revulsant.*
		Eliminative.
		Sedative.
		Stimulant.
Vapor Bath.....	{	Eliminative.
		Relaxant.
		Revulsant.
General Cold Bath	{	Stimulant.
		Anti-febrile.
		Sedative.
Shower Bath and Douche.....	{	Stimulant.
		Sedative.
Tepid and Cold Sponge Bath...	{	Anti-febrile.
		Soothing.
		Cleansing.
Hot and Cold Hip or Sitz Bath..	{	Local Tonic.
		Local Relaxant.
		Revulsant.
Hot Foot Bath	{	Revulsant.
		Eliminative.
		Stimulant.
The Pack	{	Soothing.
		Eliminative.
		Anti-febrile.
The Electric Bath		Stimulant.

THE GENERAL HOT BATH.—By this is understood the immersion of the body in water having a temperature of from 90° to 115° F. At 90° the bath is moderately warm; from 100° to 115° very hot. As we have seen, the general hot bath has five actions—revulsive, eliminative, relaxant, sedative and stimulant; it is, furthermore, the most perfect type of the first three; less so of the last. For this reason we shall say a few words regarding its mode of action. Except in cases of momentary immersion, the hot bath is weakening to the sick. Its first action is to raise the temperature, slightly increase the force and frequency of the pulse, and relax the skin and dilate its vessels. The sensation of fullness of the head and the flushing of the face give way as soon as free perspiration commences; if this does not appear promptly, it may be excited by drinking a cup of warm tea, or a glass of water. If a relaxant effect is desired, the patient may be allowed to remain in the bath for twenty

* By a revulsant bath is here meant one that acts to draw blood away from the seat of threatened or existing disease.

We shall for convenience, discuss each bath separately, not following the order above given.

minutes or half an hour, even longer if required. If the person be very weak, it is better to make use of other means for producing relaxation than to risk the debilitating effects of the prolonged hot bath. When the patient is robust, as a strong, apparently healthy child suffering with convulsions, this bath is a very useful agent; the good it does far out-balancing the evil, and there being little or no risk attending its use. In acute illness, the general hot bath is rarely used, the patient being too weak to be moved, and the desired result being better accomplished by other means—as the pack, the sponge bath, vapor bath, etc. Allowances being made for differences in temperature, to obtain the different effects of the hot bath, the following time should be calculated on: stimulant, five or six minutes; revulsive, six to ten; eliminative, the same; relaxant and sedative, from ten to thirty. It must be understood that revulsion and elimination usually go together, at least the revulsion produced by the hot bath. After a person's exposure to cold or wet, when there are distinct chills or chilly sensations, with a tendency to congestion of some of the internal organs, more commonly the lungs, the general hot bath or the hot foot-bath, by restoring the equilibrium of the circulation, thus freeing the congested parts of their excess of blood, often prevents an impending attack of pneumonia, bronchitis or pleurisy. The first stage of, or rather the first departure from healthy condition in almost every disease being congestion, if we can dissipate congestion we can usually ward off the disease. In medicine there are recognized two principal forms of congestion—active and passive. In active congestion (acute hyperæmia) the excess of blood in a part is due to an unusually rapid carrying of it there by the arteries; in passive congestion the excess is due to a failure of the veins to remove the blood, there being usually no marked excess of blood carried to the part. It is this active congestion that usually forms the first stage of all acute diseases, and in which revulsant baths are especially efficacious. It is thus that these baths often “break up a cold” and prevent it from “settling on the lungs.” The good resulting from the free perspiration in such cases is not due to the elimination of any poisonous material by the skin, but to the fact that free action of the skin cannot take place without the presence of an unusual amount of blood in it. Thus, while the first effect of the bath (revulsive) is to draw the excess of blood from the threatened organ, its second effect, free perspiration, when promoted by warmth in bed and warm drinks, is to keep the excess of blood, that would otherwise congest the threatened organ, actively employed in the skin. It should, therefore, be borne in mind that, to obtain the best effect in these cases, a good sweating should follow the bath. For these purposes the

hot foot-bath is usually better than the general hot bath. There are some diseases where the beneficial effects of the sweating are due solely or chiefly to the elimination of certain morbid materials from the blood. This is the case in rheumatism and acute and chronic disease of the kidneys; in these affections, however, the vapor bath is to be preferred.

THE HOT FOOT-BATH.—This very valuable agent is well known and extensively used in domestic practice. In almost all cases it is to be preferred to the general hot bath. Its action is to draw blood to the feet and legs, equalize the circulation and cause a free perspiration. It is to be taken as follows:

A foot tub or scrubbing-pail is to be two-thirds filled with water as warm as the person can bear it. To this may be added a handful of salt and two tablespoonfuls of mustard. Foot-baths taken in a wash-bowl are, at best, poor things, as well as untidy, there being danger of upsetting the bowl. The legs should be immersed nearly to the knees, and be allowed to remain for a period varying from fifteen to thirty minutes, the person being meanwhile well wrapped in a heavy blanket or quilt. He should always be in his night clothes, so that when the bath is over, he may be put to bed without delay. He is then to be warmly covered and left to perspire freely. The following morning he is to be rapidly sponged off with warm water and bay-rum or whiskey. This is quite as necessary as the bath itself, for his body is covered with the results of his heavy sweat. The bed linen should be completely changed, having been previously well warmed and aired.

In cases where there is not a proper amount of blood in the pelvis of the female to perform the normal monthly function, or in sudden repression, usually due to exposure to cold, the hot foot-bath sometimes proves effective. For this purpose, however, the hot hip-bath is to be preferred. In cases of cholera infantum, dysentery, or the diarrhœa of children, these baths often produce the happiest results, checking the alvine discharge, restoring warmth to the surface, and relieving the troublesome head symptoms, so often present. In congestion and inflammation of the brain, the foot-bath may be employed to great advantage, cold being at the same time applied to the head. The mustard and salt which are usually added to the foot-bath act as gentle stimulants to the cutaneous surface of the legs, are possibly slightly irritant, thus increasing the amount of blood in the parts, and at the same time accelerating its movement.

The cold foot-bath should never be used in the sick-room. In cases of fœtid and perspiring feet, it is often of great service. A cold foot-bath

at night, followed by brisk rubbing with a coarse towel until the feet are in a glow, does away with that troublesome affection, cold feet.

THE HIP OR SITZ BATH may be used either hot or cold. Above 90°, it acts as a relaxant and soother; below 60°, as a direct tonic to the contents of the pelvis. It may be taken in a small wash-tub. Tubs are, however, made for that purpose. In the warm bath, the water should be as hot as can be borne, the patient should be put into it carefully, with the legs and body well covered, and be allowed to remain there about fifteen, but seldom over thirty or thirty-five minutes. The exceptions to this are cases such as retention of urine and the passage of kidney stones, when it acts as an allayer of pain and spasm, and may be continued for a much longer period. As a general thing hot water alone is to be used. If the direct action on the contents of the pelvis only is desired, the patient should be dressed at once and be allowed to sit or walk around. If put to bed, the sweating is accompanied by an increase of blood in the skin, which takes from the pelvis the blood that the bath has just drawn to it.

The cold hip-bath is a decided local tonic. It is to be followed by some exercise, or if the patient be too weak, by a brisk rubbing. It is of service in relaxation of the rectum, paralysis of the bladder and like affections. Also in young girls whose menstruation is delayed or irregular; here the cold should be followed by the hot sitz-bath. These combined baths should be given about once a week, and be followed by brisk rubbing and exercise.

If it is desired to continue the action of the hot hip-bath after the person leaves it, a good sized hop and chamomile poultice (see p. 41) may be laid over the lower part of the abdomen, and kept there for several hours.

THE SPONGE BATH may be taken hot or cold, and is a modification of the general hot or cold bath. In action it is cleansing and stimulating, cooling and occasionally eliminative. It is suited to cases of acute disease, where the sick person is too weak to be raised and put into a tub. These spongings are especially grateful to fever patients, acting directly to lower the temperature of the body, soothe restlessness, and induce a pleasant, refreshing sleep. Aside from its cleansing action on the skin, and its soothing and anti-febrile power, just spoken of, it has a decided tonic action. There must, however, be strength enough to allow of reaction, and for this reason very weak patients should be sponged with warm water only. The cold sponging has almost a specific curative effect on the *night crowing* of infants.

To a basin of hot, lukewarm or cold water, as the case may require, there should be added one tablespoonful of mustard, two of salt, and six of whiskey or bay-rum. These incite the skin to action, and the liquor by evaporating cools the surface gently, thus reducing the temperature. Camphor, *dilute* acetic acid and other substances may be added for various purposes (see p. 17.) If it is not desired to produce sweating, only the water and whiskey need be used. If free perspiration be desired, the three ingredients above mentioned should be used, and the person well covered with bedclothes after the body has been briskly rubbed. Fever always carries the temperature of the body above what is known as "the sweating point," and the whiskey and water, by reducing the fever, tend to restore this valuable function. Hot tea or a glass of water will sometimes start the perspiration.

As a rule, but one part should be sponged at a time, a soft rag or sponge being used, and the part rapidly dried. In the eruptive fevers (scarlatina, measles, etc.) the part should be dried by mopping, the skin being too tender to allow of rubbing.

THE GENERAL COLD BATH.—This is the type of all the stimulant baths, and like them all, must not be prolonged, and reaction must be secured or harm will result. The general cold bath is too severe a measure to be used in acute illness or convalescence from it, unless under the direct supervision of the attending physician. These baths have been used extensively in Germany and England, for the purpose of reducing high temperature, and with very good results. They have not been much tried in America, and should not be undertaken by any one but a competent physician. Stimulant when brief and followed by free reaction, they are markedly sedative when prolonged, even to healthy persons. In acute illness, where decided and continued reduction of temperature is not aimed at, some of the other baths in this class are to be preferred; as the sponge bath and cold pack.

This bath should always be followed by brisk rubbing. Mustard may be put in either the hot or cold bath, if needed. The head should be wet with cold water before going into either. In giving nervous children a cold bath, put their feet in a tub of hot water, wet the head, and then sponge the body with cool water. After this they may be put directly in the tub for two or three minutes, if necessary, and when removed, be well rubbed and warmly covered or dressed.

Medicated baths, hot or cold, looking to the absorption of any of the drug used, are valueless. That no such absorption takes place has been settled beyond question. Medicated baths are sometimes of service in skin diseases.

No instructions as to how hot and cold baths are to be taken are necessary, as every one is familiar with their *modus operandi*.

SEASALT BATHS.—During convalescence from many weakening diseases, these baths are of very decided benefit, giving strength to the patient, and tone to the skin and muscles. The appetite and digestion are also improved by it. Whether in health or disease, the proper time for taking a bath is about three hours after breakfast, dinner being so arranged as not to take place under two hours after the bath. In weakly persons a little rum and sugar may be taken just after the bath.

Seasalt is an admirable preparation. It may be used in the proportion of two tablespoonfuls to the gallon. Two elements of the natural sea-bath are, of course, lacking—the sea air and the motion of the waves. Nevertheless the substitute is a most excellent restorative measure. When able the patient should take a very little exercise after it. The skin should be rubbed until there is a good hearty glow upon it.

THE DOUCHE.—THE SHOWER BATH.

These are really the same in principle, the difference being only one of degree. The douche is a most powerful agent, and should be used only in cases of poisoning by opium and chronic alcoholism. The person so suffering should be stripped and the water poured on his head and body from a height of five or ten feet until he revives. The pulse and respiration must be watched with great care meanwhile, as this is a powerful agent and one likely to do harm in ignorant or careless hands. Dashing water in the face is a modification of the douche, is harmless, and specially efficacious in fainting spells, hysterical attacks, and the “night-crowing” of infants. The colder the water, the better the effect.

It must be remembered, in using the douche in alcoholism and poisoning by narcotics, that it is only an adjunct to other treatment. Where opium or other poison has been taken accidentally or intentionally an emetic should be given, and the doctor sent for at once. Mustard is the best emetic in these cases, and has the advantage of being in every household. A heaping dessert-spoonful should be stirred into a pint of warm water, of which the patient is to drink as much as possible. If vomiting does not result, another dose may be given in ten minutes. Ipecac is slower in action and depressant. To adults, the syrup or wine of ipecac may be given in two table-spoonful doses; the fluid extract in forty drop doses.

The douche should, furthermore, be only used, if used at all by lay-

men, in extreme cases, and until the arrival of a physician, who will know at once what is best.

The shower-bath, though not so powerful, is still a very strong agent, and except in cases where the douche is useful, should never be used in illness; other baths, as the cold sponge-bath, are equally efficacious and more readily rallied from by convalescents, than this.

We, every now and then, hear of cases where persons are poisoned by mistake, the wrong medicine being given. Every bottle containing medicine in any way poisonous, should be put in a bottle or box, in some way peculiar, so that when a person puts their hand on it, day or night, they know *by the touch alone*, the character of its contents. Such bottles can be had by druggists, but they are not generally used by them.

Nervous and gastric headache, and pain in the head in fever cases, are often greatly relieved, sometimes cured, by pouring cold water on the head for some minutes. The head should hang over a bowl or basin, so that the bed shall not be wetted.

THE COLD PACK.—THE HOT PACK.

These are very valuable means for reducing fever and producing free sweating. They, further, have a soothing effect on an irritated nervous system. The latter is less apt to produce shock, though this is always slight. It should, therefore, be preferred for very weak patients. The plan of giving is as follows: The windows and doors of the room must be closed, the bedclothes removed, and the patient laid on two heavy blankets, evenly spread out. A sheet is then rapidly wrung out of hot or cold water and laid upon the blanket; a sheet though wrung out of warm water is usually cool or cold before the patient reaches it. This is of no consequence, as he very soon becomes warm from the blankets in which he is wrapped. Indeed, the coolness of the sheet is of advantage, being slightly stimulant and never hurtful. The sheet should be brought up from one side and snugly tucked in on the opposite, from the neck to below the feet. The other side of the sheet is to be treated in the same way, as also the blankets, one after the other. When completely enveloped, the feet are to be raised and the blanket and sheet turned under them. In this, he may be left from thirty minutes to two hours. We have seen patients thus enveloped sink into a natural, refreshing sleep, the first in several days. The sheet should be wrung out as dry as possible before being applied. When the degree of perspiration desired has been reached, the blankets and sheet are removed and the patient is rapidly sponged off with lukewarm water, dried, and well covered in bed. If the patient is able to react

well from it, a good tonic effect is had by sponging him off with cold water, and then rubbing him well. The pack is used to eliminate morbid material from the system, as well as to quiet nervousness and reduce temperature. Wrapping a fever patient in a wet sheet, and leaving him thus with no other covering, with the object of reducing temperature, is never to be used save by the physician, who knows when it can be borne.

Parts of the body may be packed in the same manner. This will often allay the severe pain of gout and rheumatism. Compresses are really only local or minor packs. Hot compresses to the abdomen are often of service in cholera infantum, colic and dysentery. Cold compresses to the neck are of service in croup, inflammation of the throat, whether simple or occurring in the course of the eruptive fevers, as scarlatina.

Speaking of producing perspiration by means of the pack, Dr. Kinger* says: "There can be no question of the superiority of this treatment over that of swathing the patient in flannel clothes, and covering him with blankets to make him sweat. To avoid the supposed danger of catching cold, these woollen clothes are worn day after day, till saturated with putrefying perspiration, the stench sickens and deappetizes the patient, and a crop of irritating miliary vesicles is engendered, which breaks the patient's sleep."

And again: "This treatment is useful in specific fevers and acute inflammatory diseases. It has long been employed in scarlet fever, and should be used from the beginning and throughout its course. In moderate attacks it is sufficient to pack the patient for from thirty to fifty minutes; but if the fever is very high—if the rash comes out slowly, imperfectly, and is of a dull color—if the patient is restless and wanders, the packing must be continued an hour or longer, and be repeated three or four times a day. This treatment develops the rash, greatly reduces the fever, quiets the pulse, renders the skin moist and comfortable, and abates the restlessness and wandering.

"On suppression or recession of the rash, when serious symptoms arise, the packing is especially indicated."†

VAPOR BATH.—This bath is often of the greatest service. It is used chiefly to produce free perspiration, when it is desired to rid the blood of some morbid material. This is especially the case in acute and

* Op. cit. p. 34.

† Op. cit., p. 33.

chronic Bright's disease and rheumatism. Vapor-bath utensils are to be had at any instrument maker's. In case there is no time to send for these, arrange a standard on the gas bracket, so as to hold a large-sized coffee-pot, or make some arrangement whereby water can be rapidly heated near the bed. Fill the pot half full of water, hot, if at hand, and fixing a rubber tube over the end of the spout, conduct it under the bedclothes, which should be somewhat raised by half barrel-hoops. In this way the steam generated in the kettle will pass directly to the patient's skin. Care must be had that he is not burned by it.

Fig. 7.



CROUP KETTLE.

This same apparatus may be used in croup. In this case a tent of sheets should close him in completely. He is thus breathing steam, without being burnt. (Fig. 7.) When the patient is able to get up, he may be stripped, placed in a chair, closely enveloped in blankets, and the vapor be produced by a tin kettle or pan, heated by a spirit-lamp beneath the chair. This is a very effective manner in which to give this bath. The same proceedings may be taken where a mercurial or sulphur bath is to be given, great care being taken to have the blanket tight about the neck, to prevent the fumes from being inhaled. The substance to be

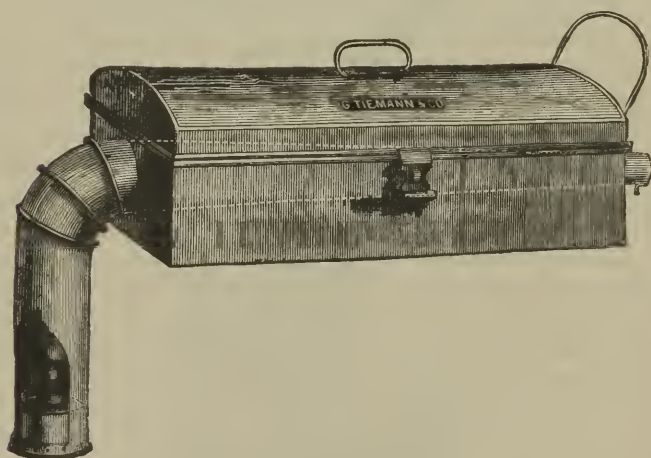
vaporized is to be placed on a metal plate, over a spirit-lamp, beneath the chair.

TEMPERATURE OF VAPOR, FAHR. "

	BREATHED.		NOT BREATHED.	
Tepid Vapor Bath.....	90	100°	96°	106°
Warm " "	100	110	106	120
Hot " "	110	130	120	160

A hot-air bath, usually less effective than the vapor bath, may be given by driving hot air beneath the bedclothes, or producing it by a lamp under a chair in the manner described (Fig. 8).

Fig. 8.



HOT-AIR BATH APPARATUS.

Dr. Nevin's plan of giving a rheumatic patient a pleasant acid steam bath, is given as follows, by Dr. Ringer : †

"A couple of common red bricks are to be placed in an oven hot enough for bread, and in half an hour, or little more, they are sufficiently heated for the purpose. The patient's body-linen having been previously removed, these two bricks are to be folded up in a piece of common thick flannel, thoroughly soaked in vinegar, and laid on two

* Cooley's Cyclopedia of Practical Receipts. London, 1864. Article, *Baths*.

† Op. cit., p. 31.

plates. The one is to be placed about a foot distant from the shoulder, and the other about equally distant from the opposite leg, and the bedclothes are then to cover the bricks and the patient closely round the neck. A most refreshing acid steam bath is thus obtained, and the supply of steam may be kept up, if necessary, by removing one brick and replacing it by another hot one, kept in reserve. When the patient has been in the bath for fifteen or twenty minutes, the bedclothes and plates should be removed, and *the patient instantly mopped all over, very rapidly, with a towel wrung out of cold water*, and then should be quickly rubbed dry. Dry, warm linen must be put on at once, and dry bedclothes must replace those which were on the bed. * * * *
The steam bath and subsequent cold douche should be continued after the patient is able to walk about, as they contribute to the healthy action of the skin, and promote free mobility of the joints."

THE ELECTRIC BATH, which acts as a general as well as cutaneous stimulant, may be given as follows: *

"Place an ordinary bath upon a sheet of mackintosh, which, being a non-conductor of electricity, has the effect of insulating the bath, as it is termed. Then fill the bath with warm water to a convenient height, and to the water add a handful of salt or a wine-glassful of vinegar, in order to increase its conducting power. Next get a galvanic battery, one having 30 or 40 Leclanché Elements is sufficient, and place it on a chair or on the floor beside the bath. To each of the poles of this battery, positive and negative, affix a suitable length (3 or 4 yards) of insulated telegraph wire, having its extremities freed from the gutta-percha or other insulating material. Place a length of stout broom-handle across the bath, resting on its two edges, and round the middle of this twine the bright metal end of the wire in connection with the positive pole of the battery, covering it with a piece of flannel, or wrapping it round with a sponge. The bather then gets into the bath, and gets hold of the centre of the broom-handle, previously moistened, so that his hands are out of the bath. The end of the negative wire is then placed in the bath itself, and as this is done the bather will feel the shock of the electric current. The current in this case travels from the positive pole of the battery through the wire to the broom-handle, down the patient's arms, through his body, to the water of the bath, and so to the negative pole. This form of bath is a very powerful stimulant to the skin, but beyond its action on the skin we know nothing. It is said that by its aid it is possible to extract metallic bodies, such as mercury or lead,

* Baths and Bathing. "Health Primer." D. Appleton & Co.

which may be lurking in the body and causing harm. Of such a power there is no evidence whatever. We have heard it said that at some galvanic baths visitors have been shown discolorations on the side of the bath as evidence of the deposits of mercury, etc., but this is merely a quackish imposition, and it is well that persons should be on their guard against it.

"The *electro-magnetic* bath is given in the same way as the galvanic bath, an electro-magnetic body being substituted for the galvanic battery."

PROPORTIONS OF SOME INGREDIENTS OF BATHS:

Seasalt or common salt, 2 oz. to the quart.

Bran Bath. 1 lb. to the gallon—boil.

Camphor Bath. 1 oz. to the gallon; boiling water; used also in vapor bath.

Alkaline Bath. Carbonate of potash, $\frac{1}{2}$ oz. to the gallon.

Balsamic Bath. Bordeaux turpentine, 1 oz. and liquid tar $\frac{1}{2}$ oz. to 1 gallon.

Glycerine Bath. Glycerine, 1 oz., gum arabic, 2 oz., water, 1 gallon.

Sulphur Bath. 2 oz to 1 gallon.

Gelatine Bath. Isinglass, $\frac{1}{2}$ oz. to gallon.

While by no means having canvassed the whole subject of the external use of water in disease, we have said as much as space will permit, have given some practical directions, and have, we hope, aroused enough interest in the mind of the reader, to lead him to a careful study of the subject.

POULTICES:—Almost every person we meet, with any pretensions at all to a knowledge of domestic medicine, has some favorite poultice or modification of a poultice, which she believes is better than any other. Any poultice, properly made, answers every indication. The virtues of a simple poultice rest only in its retention of heat and moisture. Of all the various substances used, linseed-meal is probably the best, its consistence, when moistened, and its oily nature especially fitting it to remain moist and hot for a long time. Ground slippery elm is good. Corn-meal, slightly browned in a spider, is more cleanly than linseed-meal, and about as efficacious. Bread and milk make a pleasant, light poultice. Soap and sugar belong rather to the list of plasters; the active principle is the alkali in the coarse, brown soap, which softens the tissues, and the compound further aids this action by retaining the heat. It is said to "draw" very decidedly, and has been used on felons and boils. A word here about felons; they should be laid open freely with

the knife, as soon as recognized, otherwise the affected finger-end is likely to be lost. The linseed-meal and the elm poultices are to be made by pouring boiling water on the substance, and letting it simmer for a few minutes. It is then to be spread on a cloth, one part of which is folded over it, and applied to the seat of pain or disease. The heat may be retained for an unusually long period by covering the outside of the poultice cloth with oil-silk. Poultices should be renewed as often as they lose their warmth. The kettle containing the meal should not be allowed to remain on the fire all the time. Just before making the new poultice the kettle should be put on the stove, a little fresh water added, and the whole well stirred while heating.

It is to be borne in mind that while poultices hasten the formation of pus in abscesses, and the separation of the *core* in boils, they tend by their very heat and moisture to bring out a fresh crop of the latter. In case of severe pain, a little laudanum for adults, and paregoric for children, may be sprinkled on the surface of the poultice. Charcoal poultices have been tried and found very useful applications to foul ulcers and wounds. They absorb the ichorous or fœtid discharge, and cleanse the surface of the wound. Powdered charcoal should be put between two layers of moderately fine gauze, and this be applied directly to the wound. Charcoal may be sprinkled on the surface of other poultices, or be mixed with them, in cases where there is much supuration. A half teaspoonful of carbolic acid may be added to the pint of any poultice material for the same purpose. Yeast poultice, made of the liquid yeast, has been used in like manner. If necessary, it may be thickened with browned flour or corn-meal. When it is desired to bring the face of any poultice directly upon the affected surface, as in wounds or ulcers, the meal or other substance may be spread on gauze. The back of it is to be protected with cloth and oil-silk.

Tobacco poultices are dangerous, especially when applied to the inner surfaces of thighs and legs, armpit and groin. They are very dangerous in children.

Hop poultices, and poultices of hops and chamomile, combine anodyne with the properties of the common poultice. They are of use in neuralgia, sleeplessness, tooth and earache, and in painful affections of the abdomen in children or adults. Retention of urine in children is often speedily relieved by them. They may be applied to the abdomen in the colic of children, cholera morbus, and cholera infantum.

By adding a tablespoonful of glycerine to each poultice, it is kept moist, of uniform consistence, and does not adhere to the parts.

A useful poultice is made by frying onions, chopped very fine, in

pork fat. This poultice retains heat and moisture for a long time, and acts also as an irritant. The objections to it are the odor of the onions and the soiling of the garments with the fat.

Charcoal Poultice (Ph. L.).—Soak bread, 2 oz., in boiling water, $\frac{1}{2}$ pint; to this add, by degrees, of linseed-meal, 10 drachms, and afterwards of powdered (recently burned) charcoal, 2 drs.; lastly, sprinkle on the surface of the poultice powd. charcoal, 1 dr.

Poultice of Yeast (Ph. L.).—Beer yeast and water, at 100° F., of each 5 fl. oz.; stir in flour 1 lb., and place it near the fire until it rises.

Tobacco Poultice.—A pint of boiling water is to be poured upon ten cents worth of fine cut (chewing) tobacco, and linseed-meal stirred in until a proper consistence is reached.

PLASTERS are of various kinds, each kind having its special work to accomplish. They may be conveniently classified as:

1. *Irritant.* 2. *Anodyne.* 3. *Protective.* 4. *Mechanical.*

Chief among the irritant or counter-irritant class stands the mustard plaster. It may be made to vary in strength by diluting with flour. The delicate skin of children can seldom bear more than one part of mustard to four of flour; and the weaker plasters, though not producing so rapid an effect, act better by acting during a longer period. The "strength" of a mustard plaster, that is to say, its power to redden and blister the skin, is much increased by making with vinegar, or part vinegar, instead of with pure water. That mustard plasters made with white of egg will not blister, however long they remain on, is a popular fiction. The mustard papers sold in the drug stores are very convenient, requiring only to be dipped in water before being used. They can be cut of any size and shape, and be made to fit a part accurately and evenly. The common plaster is made by spreading mustard, previously moistened with water, upon a thin cloth, and then turning the cloth upon itself. It is to be placed with its face upon the part to be acted on. It should be left in position for a period varying from twenty minutes to an hour, according to the amount of irritation desired.

Next in point of common use, but standing first in point of strength, is the cantharides, or Spanish-fly, plaster. It is so strong that it always blisters, and should never be used unless under advice of a physician. In children this plaster sometimes produces sloughing, from the intensity of its local action, and congestion, and even inflammation of the kidneys, with suppression of urine, may result from the absorption of some of the material by the blood. This plaster is procured at the drug stores, already spread.

2. *Anodyne*.—Belladonna and stramonium plasters are the only ones that I shall speak of under this head. The former comes already spread, and has simply to be applied to the surface, when it sticks fast with the heat of the body. It is of service in neuralgia and rheumatism; especially lumbago. They are both of service in glandular and other inflammations and enlargements.

3. *Protective*.—These plasters, the name of which is legion, are of service only in that they protect certain portions of the body, as the chest and small of the back, from cold, and act as gentle counter-irritants during a long period. They are known as porous, electric, poor man's, etc., etc., *ad infinitum*. One is about as good as another, and none of much service.

4. *Mechanical*.—The most important are the two forms of surgeon's plaster—the plain and the "swansdown." The first is that used in surgical dressings, to bring the edges of wounds together and maintain them in apposition. Every family should have a quarter or half yard of it. It requires to be heated before being applied. The swansdown is very heavy and strong, and is used only in such surgical cases as require the attention of the doctor, who knows when and where to apply it.

BLISTERS.—Blisters are usually produced by painting the required space with a little vesicating collodion, applying a Spanish-fly plaster, or with ammonia. The latter, when small blisters are needed, is the speediest, and is easy of application; all that is necessary being usually at hand. Saturate enough cotton to fill a small pill-box, or watch-crystal, with the officinal *stronger* water of ammonia. Place this cotton in the box or glass, and invert on the skin, holding it in position for about three minutes. It sometimes takes a little longer than three minutes to raise a blister in this way, but the time required by different skins is usually easily determined.

When filled to distension with fluid, the blister may be pricked with a needle, the serum be allowed to run out, and the raw surface dressed with a little oxide of zinc ointment spread on sheet lint.

CUPS.—Cups are of two kinds; wet and dry. By wet cupping we mean the scarifying of a surface, from which blood is afterwards drawn by exhausting the air in a metal or glass cup. By dry cupping we mean the drawing of skin into a glass or metal cup by exhausting the air therefrom. This proceeding draws an excess of blood into the skin thus treated, usually rupturing some of the capillary blood-vessels, and allowing some blood to escape into the tissues. Wet-cupping is

never used for the abstraction of blood from a part simply for a remedial action on that part. It is intended to produce a certain degree of counter-irritation and to withdraw blood from the deeper tissues, as the liver, kidneys or lungs.

The exhaustion of air is accomplished in various ways : (*a*) by means of a little air-pump ; (*b*) by means of a hollow rubber ball, out of which the air is squeezed before applying it ; (*c*) by rarefaction of the air. In case the regular cups are wanting, a cup may be applied in the following manner : Take a small wine-glass, dip a little piece of tissue-paper in ether or alcohol, light it, thrust it into the glass, and apply the glass to the part to be treated. As the air is rarefied by the rapidly burning paper, the flesh will be seen to rise into the glass. One or more may be put on as the case may require, and be left there for half an hour. If it is desired to wet-cup, and no instruments are at hand, scarification may be produced by setting four needles into a piece of wood, eye-end imbedded, and scraping the skin for a little time until the blood begins to show ; over this the cup is to be applied. The small vaccinating scarifier shown at Fig. 9, is very cheap and convenient. In sudden dropsy of the lungs, cupping is invaluable. Six or eight cups should be put on.

Fig. 9.



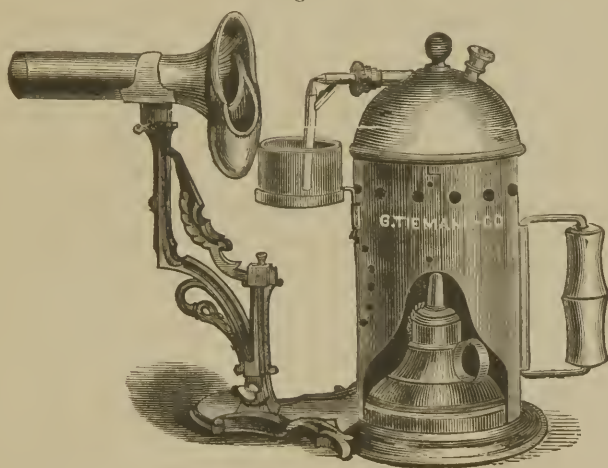
VACCINATING SCARIFIER.

LEECHES are to be had at almost all drug stores. They are used chiefly about the head and neck, for the local abstraction of blood. To apply one, put it in a wine-glass, invert the glass on the skin, and keep in position until the leech has taken firm hold. Momentary immersion in cold water will often make them bite quickly. When full they will drop off of their own accord. If further abstraction of blood is desired, bathe the part with warm water, which will promote the bleeding. The bleeding from leech-bites is sometimes hard to control. Ice should be used first, and if this fails, cleanse the parts, and tearing a common glazed card into small pieces, press a piece firmly for a minute over the bite, leaving it there. This is usually prompt and efficient. When through with the leeches put them in a tumbler or bottle of water, covered with gauze.

CROUP KETTLE.—In case there is not a regular croup kettle in the house, steam may be generated in a coffee-pot and conducted to the sufferer through a rubber tube, as described at page 37.

For croup, diphtheria and diseases of like nature, the steam atomizer is a very convenient apparatus. The steam may be used pure, or be medicated, by adding the drug to the water in the cup. These instruments are always advantageous, as steam can be produced in a very few minutes, night or day. See Fig. 10.

Fig. 10.



STEAM ATOMIZER.

JOINTS may be done up in cotton batting with a covering of oil-silk. It often gives relief to pain, especially after fomenting with decoction of poppy-heads, hops or plain hot water, also after painting with iodine. This especially applies to rheumatic joints; this is better than wrapping in flannel.

FOMENTATIONS are of service in allaying pain and spasm. They are chiefly used in joint disease. The poppy fomentation is that most commonly employed. It is made by pouring two quarts of boiling water on four ounces of poppy-heads. A half ounce of belladonna leaves may be added with advantage. The joint or affected part may be sponged off with this, or be wrapped in cloths, preferably flannel, soaked in it. These are to be renewed every few minutes. They may be rendered more efficacious by surrounding them with a double layer of oil-silk.

Flannels wrung out of hot water and applied to the abdomen, being changed every few minutes, are very soothing in the pain of colic, also when applied to the throat in scarlet fever. The water used must be hot, and the cloth covered with a dry one or oil-silk.

When it is desired to keep a part hot, two cloths should be used; one should be ready in the fluid, and the other on the part. As the flannel on the joint is about to be removed, the flannel in the hot fluid should be taken out, the water quickly wrung out in a towel, and the cloth applied as the other is removed. In this way the part is not allowed to get cool, as will be the case if some such plan as this is not followed. White flannel retains heat longer than colored flannel. The whole should be covered with a dry cloth, or a piece of oil-silk.

In applying cold cloths to a part, the same plan, with the exception of wringing out the cloths in a towel, may be followed. The bowl containing the fluid should be stood in a deep dish or pail of cracked ice. Ice melting in the fluid weakens it. As evaporation of the fluid increases the cooling power of the application, the wet cloth should be left uncovered; it being of some light material instead of flannel. The compressor on the tube of the fountain syringe may be so arranged as to allow water to fall, drop by drop, upon a part. In such case there should be something below the part to protect the bed from wetting.

POPPY FOMENTATION.—Poppy-heads, 2 oz.; water, 4 pints. Boil to three pints, add 1 oz. of elder flowers, boil to a quart and strain.

POPPY AND LEAD FOMENTATION.—Poppy-heads, 2 oz.; water, 4 pints. Boil to 1 quart; strain and add 2 drachms of sugar of lead.

BELLADONNA FOMENTATION.—Belladonna leaves, 3 oz.; water, 3 pints. Boil to 1 quart and strain.

BELLADONNA FOMENTATION.—Extract of belladonna, 1 drachm; boiling water, 1 quart.

CHAMOMILE AND HOP FOMENTATION.—Chamomile and hops, each $\frac{1}{2}$ pound; water, 2 quarts. Boil to a quart and a pint, and strain.

In some cases the vegetable substances employed in the making are used as well as the liquid.

The oil-silk jacket is of great use in pneumonia and other diseases. It should be made extra large, with the seams on the outside, and be applied directly to the skin.

MASSAGE is the name given to the systematic rubbing of parts or the whole of the body. In lameness, joint disease, sluggish circulation, etc., the proceeding is often of great benefit. It should be very gentle at first, being increased in force and duration day by day. It is spoken of by Hippocrates as a curative measure. The rubbing, save in the case of joints, which may be rubbed in all directions, should be from the extremities towards the trunk and heart. The blood is thus carried out of the limbs more rapidly, the arteries and veins are improved in tone, and the nutrition and mobility of the skin and tissues are increased. Stiff joints are, thus, often restored to full power. Kneading, slapping, pounding with little cork-faced mallets and paddles, come under the same head.

SWABBING THE THROAT.—It is often necessary in diphtheria and other diseases affecting the throat or tonsils, to make applications thereto. In cases when the physician is too far distant to come often and make the application himself, as in the country, and for other reasons, this duty falls to the lot of the nurse or one of the family, and a knowledge of the proceeding is therefore necessary. It is done with either a brush or probang. The former, when used, should not be the small camels' hair brush of the drug stores, but a flat, broad one. If such cannot be obtained readily, a suitable one may be improvised by lashing three or four of the small brushes together, on a thin flat piece of board. Probangs, which are pieces of whalebone having a bit of sponge fastened on the end, are for sale at most drug stores. They may be readily made at home, by *securely* fastening a piece of sponge or soft linen on the end of a stick or whalebone. To use this properly the person's mouth should be widely opened, the tongue held down with a spoon handle, and the brush or probang, dipped in the fluid to be used, be passed into the back of the throat, and the diseased surface *rapidly* mopped or brushed. Rapidly, for the patient is apt to "gag," and will then vomit if the instrument be not at once removed. No drinks should be allowed for some time after the application has been made.

INJECTIONS.—Rectal injections, or enemata, are of three kinds; purgative, medicated and nutritive.

Purgative injections are for the purpose of ridding the large intestines of fæcal matter. In acute illness, where the person is very weak, and in chronic constipation, this method of moving the bowels is much to be preferred to the taking of laxatives or purgatives by the mouth. Enemata do not alone empty the rectum of fæces by reason of softening

and dissolving the hardened mass, but when properly given cause the intestines to contract high up, thus freeing the bowels for a considerable distance beyond the point which the injection reached. Injections as usually given are inefficient, not enough water being used, and the action on the rectum only being all that is had. An injection may be properly given in the following manner. Take a basin or bowl holding one or two quarts, fill two-thirds full of warm water, make a good suds in the bowl, using a piece of Castile soap; to this add two tablespoonfuls of castor-oil and two teaspoonfuls of turpentine. By beating and stirring *mix the ingredients well together*. In case any materials that do not mix readily with water are used, soap is added to facilitate and maintain the mixture. When simple soap and water are used, and this should be seldom, the soap acts as a lubricant. The injection now being ready, the patient is placed on his left side (the rectum passes to the left to join the large gut), and the nozzle of the syringe, the bulb being filled with fluid to the exclusion of all air, is introduced somewhat backward and to the left. The best instrument for this purpose is the rubber-bulb syringe, with various sized nozzles. One end of the syringe rests in the basin, the other in the rectum. The bulb of the syringe is to be slowly compressed and relaxed until the patient complains that he desires to use the chamber and cannot retain any more. The syringing is then to be stopped for a few moments, and as the distressing feeling passes off, is to be resumed. This is to be continued until two or three pints of fluid have been injected, when the nozzle of the syringe is to be withdrawn, and the patient must endeavor to hold the injection ten or fifteen minutes. When placed upon the chamber then, he usually has a copious movement, that greatly relieves him.

Unless the ingredients of the injection are thoroughly mixed and the oily matter and turpentine are held in suspension by the soap, they will rise to the top, and entering the syringe last will only reach the rectum, their effect on the intestines high up being lost. The nozzle of the syringe should always be warmed before it is introduced. Care should be had in introducing it that the walls of the rectum are not scraped or perforated. Great gentleness, with an observance of the directions already given, will obviate the possibility of the occurrence of accident. *Use plenty of water.*

In case the rectum is blocked up with hardened feces, as is often the case in old people, these should be softened as much as possible with soap-and-water injections, then scooped out with the finger or handle of a spoon, and the whole gut afterwards freed by a copious turpentine and

castor-oil injection. The daily use of warm injections over a long period is injurious, relaxing and lowering the tone of the intestines, and predisposing to piles and constipation.

Injections of ice-water are often of great service in hemorrhoids and chronic constipation.

Medicated.—Injections containing castor-oil and turpentine are, of course, medicated, but this medication has but one end in view, a movement of the bowels. In using the term medicated injection here, we mean those enemata containing medicines that are intended for local healing or tonic action, constitutional effect, or for the destruction of worms.

Thus hammamelis and krameria injections are used for hemorrhoids, belladonna and opium for inflamed piles, and pain and inflammation of the bladder, also to relieve the pain of cancer of the stomach or intestines. When medicine cannot be taken by the mouth, it is often considered desirable to inject it into the rectum. As a rule it requires twice or three times the amount of drug used by the mouth to affect the system in the same degree. No extended directions are given here, as these measures should be taken only under the advice of a physician, who will know just how to graduate their strength. As a rule, but a small amount of fluid—from half an ounce to two ounces—should be used at a time. In attempting to destroy worms, a much larger amount must be employed. The small hard-rubber syringes are best suited for giving medicated injections where but little fluid is to be used.

In the painful bearing-down and frequent bloody or mucous passages of dysentery, especially in children, starch injections are of great benefit, giving sometimes almost immediate relief. In some cases, however, they have to be repeated every hour. Enough of boiling water is poured on a handful of starch to make it of the consistence of thin jelly. To this may be added, for adults, thirty, and for children, five drops of laudanum, and a drachm of the subnitrate of bismuth. These are to be thoroughly mixed, injected and retained as long as is possible. If the injection has to be repeated within a short time, reduce the amount of laudanum in adults, and omit it in children.

Ringer,* speaking of the destruction of seat-worms by injection, says:—

“Injections are commonly used to destroy thread-worms, which infest the rectum and the intestines in its immediate neighborhood, but occur in no other part of the canal. As the object of the injection is to

* *Op. cit.*, p. 599.

destroy these entozoa, a sufficient quantity of fluid should be employed so as to reach a little higher than the rectum. For an adult half a pint is sufficient, and for a child, of course less must be used. To the water injected, various substances can be added, as common salt, tincture of sesquichloride of iron, lime-water, quassia, and various other similarly acting agents, with the object of either directly poisoning the worms, or of destroying them by coagulating the albuminous structures of their bodies. Injections are always successful in removing worms, and so affording temporary relief; but in the treatment of worms it must always be recollected that the morbid state of the mucus coats of the intestines, favoring the production of worms, must be remedied if a permanent relief is to be obtained. Solutions too concentrated must not be injected, otherwise inflammation may occur, perhaps severe enough to cause sloughing in the rectum and margins of the anus. A teaspoonful of salt or a drachm of the tincture of steel to half a pint of water is sufficiently strong to effect the destruction of these delicately formed animals."

Nutritive Enemata are of the greatest service in cases where from vomiting, cancer of the œsophagus, and diseases of the stomach or intestines and their adjacent glands, food cannot reach the stomach or is not retained, and digestion does not take place.

In these cases, the rectum has been used for months to receive foods, previously artificially digested, they being absorbed, and going to build up the tissues and sustain life. Moreover, the diseased organs are in this way given rest, which is a great factor in the cure of disease. Starchy foods are of little use in rectal feeding. Meats are all important. Half an ounce of liquid beef may be injected every two hours in case of extreme weakness; oftener, if necessary. The rectum should be well cleansed by injection before the food is thrown into it. A table-spoonful of whiskey or other liquor may be injected every two hours, if necessary. Beef-tea, to which pepsine or lacto-pepsine has been added, may be injected, four to eight ounces at a time. Meat, cut and pounded until very fine, should be scalded with boiling water, and after being partially digested, be also injected through a wide-nozzled syringe. To every half pound of meat there should be added fifteen grains of pepsine and ten drops of hydrochloric acid. It is to be well shaken or stirred every half hour, being kept for eight hours at a temperature of 100° F. before being used.

Defibrinated blood has been used in rectal alimentation with very happy results. Fresh blood is to be procured at a slaughter-house, and after all the fibrine is separated by stirring and beating with a bundle of sticks or twigs, to which it adheres in long gelatinous fibres, the blood

is to be treated by the addition of a pinch of salt, pepsine and hydrochloric acid, and be injected. It may be used, however, without any additions.

To four ounces, which is the usual injection for the adult, ten grains of pepsine, as much salt as can be held on the end of a table-knife, and ten drops of hydrochloric acid may be added, the whole beaten up for half an hour, and then injected. Some prefer to inject it at once, without any preliminary beating or shaking.

The subject of rectal alimentation is an extensive one, and we have only given a few practical hints here, referring those who wish fuller information, to books especially devoted to the subject.

EAR INJECTIONS should never be undertaken save under the advice of a competent physician. They should be made with a syringe designed especially for that purpose. But little force should be used in making them. The ears should never be picked; perforation of the drum, serious inflammation, and loss of hearing may result. Sharp-nozzled syringes are likewise dangerous. When, from the production of

Fig. 11.



EAR SYRINGE.

Fig. 12.



EAR SPATULA.

an unusual amount of cerumen, or wax, in the ear, it is necessary to use some instrument for its removal—the hard-rubber spatula is the safest—although syringing the ear is to be preferred to the use of any hard instrument in any other hands than those of a physician. See Figs. 11 and 12.

NASAL INJECTIONS are of great service in chronic catarrh. They may be plain or medicated. The best syringe to use in these cases is

the fountain syringe, made by the Goodyear Rubber Co. (Fig. 13.) It is to be hung on a nail on the wall; the bag filled with warm water, plain or with salt, the nozzle, placed well in one nostril, the stop-cock turned and the fluid allowed to pass in at one nostril and out at the other. Great care must be taken not to swallow or make the attempt to swallow during the operation, as this act opens the mouth of the tube leading into the ear, and water may enter and excite acute and very serious inflammation. For making moderately strong applications to the mucous membrane of the nose, as in diphtheria, etc., a small syringe should be used, and only one or two teaspoonfuls injected. Medication of the mucous membrane of the nose is best attained by the use of a steam atomizer, with tubes for both the nostrils and the posterior openings of the nose into the throat, a very common seat of chronic in-

Fig. 13.



flammation. The membrane should, when possible, be thoroughly cleansed with a warm water injection before applying any medical agents, otherwise the membrane is rarely reached, the dried mucus and pus shielding it.

SUPPOSITORIES are small conical bodies, made of cocoa-butter, with which are incorporated certain medicines—as opium, belladonna, ergot, etc. They are to be used in the rectum or vagina. They should be taken between the first and second fingers of the right or left hand of the nurse, with the thumb against the large end, the small end or apex is made to press against the anus, and, as the butter softens a little on the outside, the suppository slips in, aided by gentle pressure. If the patient inserts them himself, the large end should rest on the tips of the fingers, the in-

truduction being accomplished in the same manner. They are of great service in painful affections of the bowels, bladder, uterus, etc., their action being chiefly confined to the pelvic organs.

SURGICAL DRESSINGS.—In surgical cases certain things should always be in readiness for the physician. Hot and cold water, a wash-hand basin, one or two small sponges, two towels, and a pair of scissors. He will usually bring adhesive plaster with him. Some cotton batting and old soft linen should also be on hand. The nurse or attendant should be gentle, watchful, ready to interpret a sign or look, be quick of finger and steady of hand.

CHILDBIRTH.—At birth there should be in readiness a wash-basin, a pail of hot and a pail of cold water, a binder, clean sheets and bedding, a blanket to receive the child, a pair of scissors, a spool of strong silk and a spool of thread, a bottle of vaseline, a roll of cotton batting, one dozen clean towels, a bottle of hot water or a brick for the feet, a bed-pan, a chamber, a bottle each of ammonia and brandy, and the child's clothes. The mattress should be protected by a piece of rubber sheeting.

FOR VAGINAL EXAMINATIONS, or the performance of surgical operations, a common kitchen table is to be ready in the room. It is always better than a bed. It should be covered with an old blanket, as it is liable to be stained or soiled.

HEMORRHAGE.—The blood in arterial hemorrhage is usually red, and is thrown out in jets. Compress the limb by rope, handkerchief, or anything at hand, *between the heart and the cut*. The blood in venous hemorrhage is usually of a dark red or blue color, and flows slowly and regularly. Compress the limb *between the cut and the extremity*; or taking a piece of lint dipped in ice-water, or a knotted handkerchief, force it into and upon the wound, and maintain even pressure until a doctor comes. In cut throat this procedure is to be put into execution without a moment's loss of time.

CHAPTER III.

DIET FOR THE SICK.

SECOND to nothing, in the treatment of the majority of diseases, stands the administration of good food, properly prepared, in proper quantity, and at the right time. Save in a few instances, the dietary of the sick has been a middle ground between the physician and the patient's family, neither occupying it fully or satisfactorily. It is out of the question to expect the physician to be familiar with receipts for the various sick-room dishes, or to give his personal attention to their preparation. He should know and state *what* he wishes the patient to have, and very properly expect the nurse or family to prepare that something in a palatable and easily digested form. This knowledge is seldom possessed by the average lady, nurse, or cook, and it is for the purpose of placing a number of tried receipts before them, and making some pertinent remarks on methods of cooking, relative nutritive value and relative digestibility of foods, that this chapter is written.

It is not my intention to go extensively into the subject of foods proper. I simply wish to offer some suggestions and make passing remarks on the subject of diet for the sick, referring those who desire to study the subject at length to *Smith on Foods*, *Pavy on Food and Dietetics*, and works of like nature. I am indebted to Smith for most of the tables here used, they being chiefly made up from facts contained in his very valuable book.

First, then, as to methods of cooking. These are :

1. *Broiling.* 2. *Baking.* 3. *Boiling.* 4. *Stewing.* 5. *Roasting.*
6. *Frying.* 7. *Infusing.*

Meats are the principal articles of food to be relied on in acute illness and convalescence therefrom, as in them nutriment is presented in its most concentrated, agreeable, and easily digested form. Of the seven varieties of cooking; broiling, roasting and infusing head the list in point of desirability, while frying ends it. Fried food of any kind should *never*

be admitted to the sick-room. The process renders the food very hard of digestion, as it gives it to us cased in a dark outside of browned material and fat. It is necessary for the stomach and intestinal juices to liquefy the fat and dissolve the casing before the food itself can be reached; thus protracting the period of digestion. Fried foods are objectionable in health, much more so than in disease. Dr. Geo. M. Beard says, in his excellent little book*: "FRYING.—This is a method of cooking meat which has no other recommendation than convenience. It is a rude method, adapted for coarse natures, and disappears before civilization."

Infusing.—By infusing we mean that process best calculated to abstract, by means of water, the nutritive portions from meat. This is best attained by procuring fresh, tender meat, free from fat, chopping it fine, placing it in cold water, where it is to remain for several hours, and then gradually raising its temperature to just below the boiling point, where it is to be kept for several hours longer. A uniform heat is often best maintained by placing the meat and water in a fruit jar, the top of which is then closed, and the jar set in a kettle of hot water on the stove. The meat water should never be allowed to boil. When done it is to be strained, all fat carefully skimmed off, and be well seasoned. Beef tea, as usually made, is a tasteless, worthless fluid, holding but a very small proportion of the nutriment of the meat in solution. Meat infusions are usually made of beef, which is the meat best suited for this purpose. They are of service in acute illness or where patients cannot swallow solid food. As soon as the acute stage of the disease is over, however, and sometimes before this, small quantities of meat and other solid food are to be added to the diet for the following reasons: (*a*) Fluid foods seldom contain an amount of nutriment proportionate to their bulk. (Beef tea, as usually made, seldom contain more than a quarter of an ounce of solid matter to the pint, and a large proportion of that is salts.) (*b*) They do not present sufficient bulk, or rather sufficient consistence for the stomach to work upon. (*c*) They pass too readily from the stomach into the small intestine, being thus but imperfectly mixed with and acted upon by their natural solvent, the gastric juice. (*d*) Soups and meat infusions are not more rapidly or thoroughly digested than properly cooked solid food,† and (*e*.) they are apt to disorder the stomach and bowels. In many cases, judiciously given and properly made, they are of great service. I do not wish to be classed with those who are raising a hue and cry against all liquid nourishment. Their arguments, many of

* Eating and Drinking. New York: 1877. P. 140.

† Combe. Physiology of Digestion. New York: 1836. P. 133.

which are good, are by no means conclusive. They say that Nature seldom, if ever, gives food to man, animal or plant in a concentrated form, but leaves them to accomplish the separation of the elements themselves. True, but a poorly nourished plant is always benefited by placing about its roots, judiciously, a proper amount of manure, which is its food in concentrated form. It must be remembered, furthermore, that Nature's preparations are supposably made for healthy plants, animals and men, and not for the sickly. Perfect digestion cannot be expected from the stomach of a sick person, however well suited to that end the food may be.

In acute illness, where the patient is robust at the outset of the disease, and has not suffered much in strength, crowding the stomach with concentrated animal food is both foolish and hazardous. In cases where the digestion is very weak, and there is not immediate danger of extreme prostration, light diet, well chosen, varied, and gradually increasing in strength, is to be used.

Other meats than beef are rarely infused, as they contain too much fat for that purpose. Mutton is sometimes used, a soup being made. This is agreeable to many, especially when thickened with rice or barley, and is quite nutritious when properly made. Soups of chicken are often very palatable, though less nutritious than those of beef and mutton. The same may be said of rabbit and wild fowl. The latter are often displeasing from their strong flavor. Soups made from oysters and clams are often very well received and easily digested. This is especially true of oysters, the patient being allowed to eat a few with the soup. Milk, which is used in cooking them, adds to their nutritive value. Most vegetable soups stand very low in the nutritive scale.

BROILING.—Broiling is unquestionably the best manner in which to cook meat. By it the meat is thoroughly cooked and the juices remain incorporated with the fleshy fibre. To perform it properly, the fire should be very hot, so that the outside of the meat is at once hardened, thus imprisoning the juices within the piece so treated. The gridiron should be turned every few moments so as to cook all parts evenly. Broiling meat in the *flame* of a coal fire gives it an unpleasant odor and taste, due to the gases of the coal; and broiling over a smoky wood-fire is also to be deprecated. Hickory wood coals impart a peculiar and very pleasant odor and taste to meats broiled over them. Broiled meats should be served while hot.

BAKING OR ROASTING is an excellent and pleasant manner of cooking meat and fowl. It is really a slow broiling. It is especially suited

to large pieces. As a rule, the meat is not so well done as in broiling. Baked potatoes, hot ashes being best suited for this purpose, are often longed for by patients, and are quite allowable.

BOILING, so far as the nutritive value of meat so treated is concerned, is not a desirable form of cooking. Much of its nutritious material is taken up by the water, and, unless this also is consumed, its nutritive value is greatly lessened. Smith,* speaking of the relative value of boiled and roasted meats as foods, says:—"If the meat be boiled, the introduction of fluid into the substance of the meat, whether between the structures or within the fibres, aids the extractive process, but at the same time retains and preserves that which is extracted. If it be roasted while surrounded on all sides by the air, the heat is not applied so uniformly and gently, and therefore the outside becomes over-cooked before the inside is sufficiently cooked, and this occurs to a far greater extent than with boiling. Hence, not only is the fluid part of the juices extracted and lost, but the loss is greater than when the meat is boiled. It is, however, to be understood, that the matters extracted are only such as may be dispersed by heat; and whilst, therefore the evaporated water may carry off some of the flavors of the meat, it does not remove the salts which are present in the juices. Hence, meat which is properly roasted has lost weight more than that which is boiled; but if no account be taken of the matters extracted, it contains a larger proportion of nutritive elements than the larger mass of boiled meat, and in a given weight is more nutritious. When, however, the extracted matter is collected and used, there is a greater proportion of nutriment in the boiled meat with the broth, than in the roast meat with the liquified fat, and it is clearly desirable that both the broth and the boiled meat should be eaten together." It is very evident then, that broiled or roasted meats are best suited to the sick, as they contain a larger proportional amount of nutriment, and have their fatty matter liquified and removed by heat. It would be out of the question for a sick person to eat both the meat and the water in which it was boiled, unless the piece so treated was very small. Moreover, the water or broth would be more or less fatty.

STEWING.—Meat stews are very desirable foods for the sick. They occupy a place between broths and boiled meats. The meat is made tender, enough broth is present, rich in extractives, to furnish liquid food, and if the meat has been properly selected, will be quite free from

* Foods. New York: 1873. P. 20.

fat. All kinds of meat and fowl may be thus treated. For convalescents or invalids the stew with vegetables proves very serviceable.

Fats have been nearly universally considered as heat producers, and in acute illness with high fever, and in immediate convalescence therefrom, we want as little of them as possible. Furthermore, they are apt to digest slowly and disorder the stomach and bowels.

We give here a table* showing the relative digestibility of certain articles of diet, as determined by the experiments of Dr. Beaumont, on Alexis St. Martin, a portion of whose stomach was accidentally shot away. They are, of course, inaccurate, in that what takes the stomach three hours to digest one day, may be digested the next day in two hours. Then, too, the stomach and gastric juice of the person is much weaker in disease, than in health. Still the tables are of considerable value in giving the *relative* digestibility of these substances.

Table Showing the Mean Time of Digestion of Different Articles of Diet.

Articles of Diet.	Mode of Preparation.	Time required for Digestion. H. M.	Articles of Diet.	Mode of Preparation.	Time required for Digestion. H. M.
Rice..	Boiled	1	Catfish, fresh	Fried	3 30
Sago.....	do	1 45	Salmon, salted.....	Boiled	4
Yapioca.....	do	2	Oysters, fresh.....	Raw	2 55
Barley.....	do	2	do do.....	Roasted	3 15
Milk.....	do	2	Oysters, fresh.....	Stewed	3 30
do.....	Raw	2 15	Beef, fresh, lean, rare...	Roasted	3
Gelatine.....	Boiled	2 30	do do dry.....	do	3 30
Pigs' feet, soused.....	do	1	do steak.....	Boiled	3
Tripe, soused.....	do	1	do with salt only.....	Boiled	2 45
Brains.....	do	1 45	do with mustard, &c... do	do	3 30
Venison steak.....	Boiled	1 35	do fresh, lean.....	Fried	3
Spinal marrow.....	Boiled	2 40	do old, hard, salted...	Boiled	4 15
Turkey, domestic.....	Roasted	2 30	Pork steak.....	Boiled	3 15
do do.....	Boiled	2 25	do fat and lean.....	Roasted	5 15
do wild.....	Roasted	2 18	do recently salted.....	Boiled	4 30
Goose.....	do	2 30	do do.....	Fried	4 15
Pig, sucking.....	do	2 30	do do.....	Boiled	3 15
Liver, beef's, fresh.....	Boiled	2	Pork, recently salted....	Raw	3
Lamb, fresh.....	do	2 30	do do.....	Stewed	3
Chicken, full-grown....	Fricassee	2 45	Mutton, fresh.....	Roasted	3 15
Eggs, fresh.....	Hard boiled	3 30	do do.....	Boiled	3
do do.....	Soft do	3	do do.....	Boiled	3
do do.....	Fried	3 30	Veal, fresh.....	Boiled	4
do do.....	Roasted	2 15	do do.....	Fried	4 30
do do.....	Raw	2	Fowls, domestic.....	Boiled	4
do whipped.....	do	1 30	do do do.....	Roasted	4
Custard.....	Baked	2 45	Ducks, do.....	do	4
Codfish, cured, dry.....	Boiled	2	do do.....	do	4 30
Trout, salmon, fresh....	do	1 30	Suet, beef, fresh.....	Boiled	5 03
do do.....	Fried	1 30	do mutton.....	do	4 30
Bass, striped, fresh.....	Boiled	3	Butter.....	Melted	3 30
Flounder do.....	Fried	3 30	Cheese, old, strong....	Raw	3 30

* Combe's Physiology of Digestion, p. 127.

Articles of Diet	Mode of Preparation.	Time required for Digestion. H. M.	Articles of Diet.	Mode of Preparation.	Time required for Digestion. H. M.
Soup, beef, vegetables and bread.....	Boiled	4	Bread, corn.....	Baked	3 15
do marrow-bones.....	do	4 15	Cake do.....	do	3
do beans.....	do	3	do sponge.....	do	2 30
do barley.....	do	1 30	Dumpling, apple.....	Boiled	3
do mutton.....	do	3 30	Apples, sour and hard..	Raw	2 50
Green corn and beans...	do	3 45	do do mellow do	do	2
Chicken soup.....	Boiled	3	do sweet do do	do	1 30
Oyster soup.....	do	3 30	Parsnips.....	Boiled	2 30
Hash, meat and vegtbls.	Warmed	2 30	Carrot, orange.....	do	3 15
Sausage, fresh.....	Broiled	3 20	Beet.....	do	3 45
Heart, animal.....	Fried	4 30	Turnips, flat.....	do	3 30
Tendon.....	Boiled	5 30	Potatoes, Irish.....	do	3 30
Cartilage.....	do	4 15	do do.....	Roasted	2 30
Aponcurosis.....	do	3	do do.....	Baked	2 30
Beans, pod.....	do	2 30	Cabbage, head.....	Raw	2 30
Bread, wheaten, fresh..	Baked	3 30	do with vinegar..	do	2
			do do ..	do	4 30

MANNER OF SERVING FOOD.—Nothing is so distasteful to a patient as food served in a careless, slovenly fashion. Gravy spilled, or coffee slopped over, will often take all appetite from a patient who might otherwise have made a good meal. The tray should be perfectly clean, and be covered with a spotless napkin. The dishes should also be clean and neatly arranged, and not too much food be crowded on one plate.

Fig. 14.



BED-TABLE.

Better make two trips between the kitchen and the sick-room, than to sicken the patient with an over abundance. The food should never be allowed to become cold before being served, the patient should be clean of hand and face, and be in an easy position before partaking of it; a little glass with a few bright flowers in it, makes a pleasing appearance on the tray. The napkin should be a fresh one at each meal. The

attendant should be neat and handy, and not force the food upon the patient too rapidly. If he has to be fed by spoon, give time enough to swallow one spoonful before another is given.

A convenient "bed-table" may be made by nailing two pieces of wood on the end of a smooth, even board, one foot wide. The side-pieces may be five or six inches in length, and should be so cut out on their outer surface as to fit the side-boards of the bed accurately; thus securing firmness (Fig. 14).

This is to be placed on the bed over the patient, and while bringing everything into convenient reach, prevents the spilling and slopping that is so common when a tray is used. They may be made more or less fancy, to suit the taste of the patient or the maker; at all events they should look clean, neat and tasty. Children like them very much, using them to hold their toys or pictures.

SOME PRACTICAL HINTS.—Sir J Ranald Martin * speaks of some factors that modify the diet of the sick, as follows:

(a) *Nature of the Disease*.—There is perhaps no diseased state found in hospitals for the cure of disease in which so much food should be given as in health. In acute disease, the activity of all the functions must be lessened, and therefore less food of all kinds given, especially of the nitrogenous kind, since on that quality mainly depends the activity of function.† In chronic disease there is usually a reduced state of the powers of transformation, and hence starchy food should not be given in excess; while a full admixture of nitrogenous food is called for. Moreover, the heart's action is often enfeebled in such states; and then nutritive articles of diet, with ale or wine, are called for.

(b) *Age*.—Under the age of twenty-two some excess of food must be allowed to maintain growth. In old age the quantity should be less than in middle life; and then the quality should be such as to contain more nitrogenous food, or that which promotes the transformation of starch and fat. Arrowroot taken alone is then wasted, and probably the same may be said of fat.

(c) *Sex*.—The difference in the amount of nutriment required by the two sexes is less than is found in the dietaries of gaols. The chief ground for the difference is, the difference in weight and size of the body.

* Op. cit., p. 1012.

† Medical men of the present day do not fully agree with this author on this point. In the conditions spoken of there is great waste of nitrogenous tissue, and there must be a proportionate amount of nitrogen supplied to meet this waste.

(*d*) *Previous Habits and Employments*.—These considerations must constitute a reason for variation in diet; but from evident causes, the requirements can only be met by having two or more classes of dietaries; one of which shall suffice for those whose occupations have been more laborious, and another for such as have been of sedentary habit, more nutriment being, as a matter of course, required for the former class.

(*c*) *Season*.—The quantity of food supplied in the winter months should be one-sixth greater than in June, July, August and September, and it should be rich both in nitrogen and carbon. In the summer months the quantity of starch and fat should be much lessened, and in a greater degree than the nitrogenous, since then the powerful indirect transforming action of cold is absent.

Miss Nightingale, quoted by Martin,* makes the following excellent points in regard to cooking:

“*Cooking*.—Many a patient can eat if you can only tempt his appetite. The fault lies in your not having got him the thing that he fancies.

“But another patient does not care between grapes and turnips—everything is equally distasteful to him. He would try to eat anything which would do him good; but everything ‘makes him worse.’ The fault here generally lies in the cooking.

“It is not his ‘appetite which requires tempting’—it is his digestion which requires sparing. A good sick cook will save the digestion half its work.

“There may be four causes, any one of which will produce the same result—viz., the patient slowly starving to death from want of nutrition:

1. Defect of cooking.
2. Defect in choice of diet.
3. Defect in choice of hours for taking diet.
4. Defect of appetite in the patient.

Yet all these are generally comprehended in one sweeping assertion, that the patient has ‘no appetite.’

“Surely many lives might be saved by drawing a closer distinction, for the remedies are as diverse as the causes. The remedy for the first is to cook better; for the second, to choose other articles of diet; for the third, to watch for the hours when the patient is in want of food; for the fourth, to show him what he likes, and sometimes unexpectedly. But no one of these remedies will do for any other of the defects not corresponding with it.”

The diet of invalids or convalescents should not consist solely of

* Op. cit., p. 1011.

meats. As soon as a patient can bear it some vegetable food should be added. This is why the stew, containing both meat and vegetables, is so serviceable in building up the system. Fats, being heat producers and not easy of digestion, should never be allowed until convalescence is well advanced. Butter is the lightest and most desirable form of fat. In chronic disease and some lung affections fat is given as a food-medicine, as in convalescence from wasting disease, chlorosis, scrofula, and consumption. Butter and cream will often be found easier of assimilation and pleasanter to take than cod-liver oil. Ice-cream is a pleasant relish, and somewhat nutritious. Meat, uncooked and chopped very fine, may be thoroughly mixed with the ingredients before freezing, and makes a very pleasant and nutritious dish. Children often take it with avidity. When there is some idiosyncrasy, where eggs are not well borne by the system, these should be omitted.

MILK is at all times a most excellent food. In intestinal disorders, and when there is weak digestion and nausea, it should be mixed with one-third lime-water. It is the bill-of-fare set before us by Nature in early life, and is a very excellent one to follow and imitate, as it contains all the ingredients necessary to sustain life. Its value as a food cannot be over-estimated. There are some, however, with whom milk does not "agree", and persistence in its use in such cases is foolish and hazardous. The addition of lime-water will often remove all such objections. Milk-toast is an excellent dish for the convalescent, being palatable and nutritious. Sour milk is unpleasant to take, and often produces diarrhœa. Buttermilk is milk freed of its fat, and is a very good food. It was largely used in the army during the late war, in camp-diarrhœa, and with good results.

EGGS.—When well borne by the stomach, these are excellent food. Some persons are unpleasantly affected by them, that condition known is "biliousness" being produced. Persons who cannot eat the egg alone may take it, and digest it easily, when beaten up with wine. It is used in making "egg-nog." When the whole egg cannot be borne, the yolk alone may be given. When boiled, it is probably most easily digested when the "white" is just beginning to get flaky and a little hard. An egg should never be dropped into boiling water, as is the common custom. It is thus unevenly cooked. It should be put into cold water, the temperature of which is gradually raised to the boiling point. Poached eggs are finely flavored and easy of digestion. They should be poached in an *earthenware dish*, and be served hot. "An egg weigh-

ing $1\frac{3}{4}$ ounces consists of 120 grains of carbon, and $17\frac{3}{4}$ grains of nitrogen.* Fried eggs are always objectionable. Omelets are less easily digested than soft-boiled, poached, or raw eggs. Scrambled eggs make a pleasant dish for the advanced convalescent or chronic invalid.

ARROWROOT, RICE, and foods of that kind, are of little nutritive value, though forming the staple article of diet, in fact almost the only food, of the inhabitants of many Eastern countries. They are, however, excellent additions to the diet list, giving bulk to soups and infusions, and modifying the evils of a purely nitrogenous diet. They are very rich in starch, as will be seen by the following table:†

	STARCH.
Arrowroot	82.0 per cent.
Rice	79.1 "
Rye meal	69.5 "
Barley flour	69.4 "
Wheaten flour	66.3 "
Indian corn meal	64.7 "
Oatmeal	58.4 "
Peas	55.4 "
Wheaten bread	47.4 "
Potatoes	18.8 "
Parsnips	9.6 "
Carrots	8.4 "
Turnips	5.1 "

BREAD.—Bread is so commonly used as an article of diet, that it has attained to the dignity of being called "the staff of life." That most universally used is made from wheaten flour. Bread made with baking powder is superior to that made by yeast. In the latter, the "rising" is due to fermentation, and is carried on at the expense of the nutritive material of the bread. This process continues some hours after the bread is baked; hence the indigestibility of hot bread. Baking powders depend for their action on the liberation of gases, without the aid of fermentation, and when properly made are excellent. Cake is simply a modification of bread, being, as a rule, richer and more nutritious. It is too rich for most sick persons. Aërated bread is an excellent article.

The flour and meal prepared by the New Cereals Company of this city are very excellent and well worthy of trial. They contain the entire nutritive material of the grain, it being presented in a pleasant and easily-

* Smith, op. cit., p. 99.

† Smith. Foods. New York: 1873. P. 152.

digested form. This is not the case in the flour that we commonly buy, there being a deficiency of gluten and the salts.

FRUITS, while containing but a small amount of nutritive material, are very agreeable to the palate, and are partaken of with relish by the sick. They should always be perfectly ripe when eaten. Peaches are especially easy of digestion. The same may said of cherries. The furry coat of the peach should always be removed. Grapes are easy of digestion, and very pleasant to the palate. They should be kept cool. The skin and seeds should never be eaten, in health or disease. Water-melon is almost innutritious, and is apt to disorder the stomach and bowels. The same is true of other melons, but in a less degree.

MEATS.—Beef is, in most cases, the meat best suited for the sick. Its delicacy of flavor, large amount of nutriment, and little fat, making it especially valuable. I have already described the best methods of cooking it. During convalescence, other meats may be used for the sake of variety. The relative nutritive qualities of meats and of fish may be judged by the following table.*

FOOD.	Water.	Nitrogen.	Sugar.	Fat.	Salts.
†Beef	72.50	23.50	....	2.50	1.50
†Milk (cows) ..	87.02	4.48	7.90		.60
Veal	63.00	16.50	....	15.8	4.70
Poultry	74.00	21.00	....	3.8	1.20
Ox liver	74.00	18.90	....	4.1	3.00
Tripe	68.00	13.20	....	16.4	2.40
Sole	86.10	1.90	....	0.2	....
Whiting	92.90	2.40	....	0.3	....
White fish	78.00	18.10	....	2.9	1.00
Salmon	77.00	16.10	....	5.5	1.40
Eel	62.00	2.00	....	23.8	....
Mackerel	68.20	3.70	....	6.7	....
Pike	77.50	3.30	....	6.0	....

Composition of 1 pound of: Carbon, grains. Nitrogen, grains.*

Roast beef,	3,600	262,
Boiled beef	3,240	215,
Raw beef	2,401	175, average of carcass.
Boiled mutton	3,175	192, with usual proportion of fat.

	Ox.	Fowl.	Pig.	Sheep.	Calf.
* Muscular fibre free from fat,	25.0	24.9	24.3	23.4	22.7
Fat	2.5	1.4	6.0	3.0	2.9
Water	72.5	73.7	69.7	73.7	74.4

In the Food.*	Pig.	Per cent. stored up.	Oxen.
Of 100 nitrogenous	13.5	Sheep.	4.1
Of 100 carbonaceous	18.5	9.4	7.2
Of 100 mineral	7.3	3.1	1.9

* Smith Foods, pp. 49, 59, etc.

† Anderson. Phosphates in Nutrition. London: 1878. P. xiii, Appendix.

In judging of the nutritive value of foods, it is to be understood that the nitrogenous elements represent flesh-forming, and the carbonaceous, as starch, sugar and so forth, heat-producing materials. It is for this reason that foods rich in nitrogen are better suited to build up the system after, or supply it during long illness, than those rich in carbon. Physiology teaches us, however, that some fatty material is of service in aiding this flesh formation, and the study of disease has taught us their value in certain lung and blood disorders.

Beef extracts are, as a rule, of absolutely no value in the sick room. In the process of preparation the greater part of the nutriment is left behind, and most of the salts are preserved. While acting as occasional flavorers of soups and additions to regular diet, they are utterly unworthy of reliance as the chief article of food. When the patient needs such concentrated food, as this is represented to be, it may be better made at home, by the following process: Take four ounces of beef, free from fat, and mince *very* fine. Upon this, in a bottle or cup, pour eight ounces of water in which is dissolved ten grains of pepsine, and fifteen drops of hydrochloric acid. Stir this well, and set by the fire, where it is to remain for six hours, being kept at a temperature of about 100° F. At the end of this time, strain through a coarse strainer, season, and serve. If a little too acid add more water and a little (10 grains) of bicarbonate of soda. Such a preparation is made by Mr. Stephen Darby, of England. He says that the addition of a little fresh pancreas during the latter part of the process, will remove the bitter taste always present. I have never found this bitter taste (and I have made and prescribed this fluid beef many times), unless too much pepsine was added. A preparation of meat known as "Flour of Beef," or "Dessicated Beef," made by Mr. Hawley, of Brooklyn, I have found to contain all the nutritive elements of beef, to keep well, and have a pleasant flavor and taste. Beef tea or soup are to be made by pouring boiling water upon the powder.

Fish are usually less nutritious than meats, but are a pleasant and easily-digested food. They serve as a pleasant change from meat, during convalescence. *As a special brain or nerve food, they are worthless.* "When *boiled*, 'all large fish, with the skin whole, must be placed on the fire in *cold water*; if crimped or cut into slices or pieces, in *boiling water*; if whole, it must not be covered with more than two or three inches of water, or the skin will crack, and not only spoil the appearance of the fish, but will diminish the gelatine and gluten it contains, and instead of eating firm and full of flavor, it will be soft and woolly, especially if over-boiled' (Soyer). As soon as a scum arises from boiling, it

should be removed by the skimmer. The addition of a *little salt* or *vinegar* to the water improves the flavor of most fish, and renders the flesh firmer. * * * 'If the fish be whole, as soon as it begins to boil, remove the cover on one side, and let it simmer gently until done.' (Soyer). * * * Fish for *broiling* should be well washed in *strong vinegar*, wiped dry with a towel, and floured before putting on the gridiron." *

RECIPES.

These recipes have been taken from various sources and are all worthy of confidence. The following marks will designate the authors from whose works these recipes are taken :

‡ Ellis. Diseases of Children—*Dietary*.

§ Economical Cook Book.

¶ Ringer. Handbook of Therapeutics—*Dietary*.

|| Miss Dods. In a lecture quoted in *Phil. Med. Times*.

† Miscellaneous.

The directions should be followed to the letter :

SOUPS, BEEF TEAS, GRUELS, STEWS, &c.

Oyster Soup.—To one hundred oysters take one quart of milk, half a pint of water, four spoonfuls of flour, half a cup of butter, and one tea-spoonful of salt, with a very little cayenne pepper. Boil and skim the liquor off the oysters. Steam the flour and butter over the tea-kettle until soft enough to beat to a froth; then stir it in the liquor while boiling; after which add the other ingredients, and throw in the oysters, allowing them merely to scald. †

Macaroni Soup.—One ounce and a half of macaroni; a piece of butter, the size of a nut; salt to taste; one quart of stock. Throw the macaroni and butter into boiling water, with a pinch of salt, and simmer half an hour. When tender, drain and cut into thin rings or lengths, and drop it into the boiling soup. Stew gently fifteen minutes, and serve. ¶

Beef Soup.—One pound of beef; two quarts of water; one cup rice or barley; salt to season. Put in a soup pot; let it boil slow and steady for two hours; in another vessel have a good soup bone, leek, parsley, one onion, a potato, half a carrot, turnip; let it boil as long as the meat; when ready to set the table, strain the soup off the bones and vegetables into the other; stir up when ready to put on the table; take two eggs,

* Cooley's Cyclopedia of Practical Recipes. London: 1864. Article, *Fish*.

beat well in the soup tureen, and add the soup gradually so the eggs will not curdle. Always boil bones and vegetables separate, and strain them, and you will always have good as well as cheap soup. †

Barley Soup.—One pound of shin of beef, four ounces of pearl barley, one potato, salt and pepper to taste, one quart and a half of water. Put all the ingredients into a pan, and simmer gently for four hours. Strain, return the barley, and heat up as much as required. A small onion may be added, if not objected to. ¶

Bread Soup.—One pound of bread, two ounces of butter, one quart of stock. Boil the bread with the butter in stock. Beat the whole with a spoon or fork, and keep it boiling till the bread and stock are thoroughly mixed. Strain, season with salt, and serve. ¶

Good Nutritious Beef Tea.—Mince one pound of good beef (from which all skin, fat, &c., have been carefully removed), and pour upon it in an earthen jar one pint of cold water. Stir, and let stand for one hour. Then place the jar in a moderate oven for one hour, or stand the jar in a saucepan of water and allow the water to boil gently for an hour. To be exact, the heat to which the beef tea is raised should not exceed 180° F. Strain through a coarse sieve and allow it to get cold. When wanted, remove every particle of fat from the top; warm up as much as may be required, adding a little salt. Beef tea should, except in the hottest weather, be made a day before it is wanted. ‡

Tapioca Soup.—Two ounces and a half of tapioca, one quart of stock. Put the tapioca into *cold* stock, and bring it gradually to the boiling point, simmer gently till tender, and serve. ¶

Essence of Beef.—One pound of gravy beef free from skin and fat, chop as fine as mince-meat, one pound in a mortar with three table-spoonfuls of soda water, and soak for two hours. Then put in a covered earthen jar with a little salt, cement the edges of the cover with pudding paste, and tie a piece of cloth over the top. Place the jar in a pot half full of boiling water, and keep the pot on the fire for four hours, simmering. Strain off the liquid essence through a coarse sieve: it will be about five or six ounces in quantity. One tea-spoonful of cream may occasionally be added with advantage to four ounces of the essence, or it may be thickened with flour, arrowroot, or sago. ‡

Beef and Chicken Broth.—One pound of good, lean beef and a chicken boned should be pounded together in a mortar, a little salt added, and the whole placed in a saucepan with nearly three pints of cold water. Stir over the fire until it boils, then boil half an hour, strain through a coarse sieve, and serve. ‡

Chicken, Veal, and Mutton Broths.—The fleshy part of the knuckle of veal, a chicken, bones and all, chopped up; or two pounds of the scrag end of neck of mutton, added to two pints of water with a little pepper and salt, and boiled two hours and strained, all make excellent broth. Pearl barley, rice, or vermicelli, boiled separately till quite soft, may be added when either of the broths is heated for use. All fat must be always carefully removed by skimming when cold. ‡

Stewed Oysters.—Half a pint of oysters, half an ounce of butter, flour, one-third of a pint of cream, cayenne and salt to taste. Scald the oysters in their own liquor, take them out, beard them, and strain the liquor. Put the butter into a stewpan, dredge in sufficient flour to dry it up, add the oyster liquor, and stir it over a sharp fire with a wooden spoon. When it boils, add the cream, oysters, and seasoning, and simmer for one or two minutes, but *not longer*, or the oysters will harden. Serve on a hot dish, with croutons or toasted sippets of bread. A quarter of a pint of oysters, the other ingredients being in proportion, make a dish large enough for one person. ¶

Rice Gruel (for Diarrhœa).—Ground rice, two ounces; cinnamon, a quarter of an ounce; water, four pints. Boil for forty minutes, and add a table-spoonful of orange marmalade. ‡

Egg Soup.—The yolks of two eggs, a pint of water, half an ounce or so of butter and sugar to taste, beat up together over a slow fire, adding the water gradually. When it begins to boil pour backwards and forwards between the jug and saucepan till quite smooth and frothy. ‡

Water Gruel.—Oat or corn meal, two table-spoonfuls; water, one quart. Boil for ten or fifteen minutes, and strain, adding salt, and sugar, if desired. §

A Gruel.—Beat up an egg to a froth, add a wine-glassful of sherry, flavor with a lump of sugar, a strip of lemon-peel, and a little grated nutmeg. Have ready some gruel, very smooth and hot, stir in the wine and egg, and serve with sippets of crisp toast. Arrowroot may be made in the same way. ¶

Restorative Beef Essence, 1.—Take one pound of fresh beef, free from fat, chop it up fine, and pour over it eight ounces of soft water, add five or six drops of hydrochloric acid, and fifty or sixty grains of common salt, stir it well, and leave it for three hours in a cool place. Then pass the fluid through a hair sieve, pressing the meat slightly, and adding gradually towards the end of the straining about two more ounces of water. The liquid thus obtained is of a red color, possessing the taste of soup. It should be taken cold, a tea-cupful at a time. If preferred warm, it must not be put on the fire, but heated in a covered vessel placed in hot water. Should it be undesirable for the patient to take the acid, this soup may be made by merely soaking the minced beef in distilled water. ¶

Another Beef Essence, 2.—Take one pound of gravy beef, free from fat and skin, chop it up very fine, add a little salt, and put it into an earthen jar with a lid, fasten up the edges with a thick paste, such as is used for roasting venison in, and place the jar in the oven for three or four hours. Strain through a coarse sieve, and give the patient two or three tea-spoonfuls at a time. ¶

Quick Made Beef Tea.—Take any desired quantity of steak from the top part of the round, as this has less fat and more juice than any other part of the ox; remove every morsel of fat and divide the meat into small pieces, cutting across the grain; put the meat in a dry saucepan

and allow it to sweat for five minutes over a slow fire, stirring occasionally to prevent sticking. After sweating for five minutes you will find the meat white in color and surrounded by a very rich, nourishing gravy, which in case of great exhaustion may be given in this form. But ordinarily you next pour over the meat its weight of cold water, allowing a pint of water to a pound of beef. Stir until the water boils; it must not boil again, but simmer gently for five or ten minutes until all the juice is drawn out; then strain carefully into a bowl, and if there is a particle of fat on the top remove it with a piece of brown, unsized paper. By this method you may take off every star of fat without wasting any of the beef tea, as is done when using a ladle or spoon. In this way you may have strong beef tea in twenty minutes.

You have noticed that I have said nothing about salt. It is because in sickroom-cookery we never allow a grain to be used. In some cases of sickness, as for instance typhoid fever, salt is thought to act as an irritant and, therefore, on our sickroom cookery days, salt is left out of our list of ingredients. Of course, the nurse, if the condition of the patient allow it, may add a pinch when about to give the beef tea.* ||

Beef Tea with Oatmeal.—Mix two table-spoonfuls of oatmeal, very smooth, with two spoonfuls of cold water, then add a pint of strong, boiling beef tea. Boil together for five or six minutes, stirring it well all the time. Strain it through a sieve, and serve. ¶

Long Made Beef Tea.—Get two or three pounds of shin of beef; remove all the skin and marrow from the bone; cut the meat into small pieces, and have the bone broken up. Take also a knuckle of veal—that is, just the knuckle-bone—have it broken up and put into a strong earthen jar; place the jar in a large saucepan of boiling water, and tie the cover down with a piece of stout brown paper, using neither salt nor pepper. Let it boil slowly all day. When done, the jar will be filled with meat gravy; strain this, and when cold it will be a strong jelly. In summer, this may be served cold; and in winter, pour hot water over a portion, and you have beef tea. This will keep a week in summer, in a cold place, and much longer in winter. ||

Rice Gruel.—Ground rice, one heaping table-spoonful; ground cinnamon, one table-spoonful; water, one quart. Boil gently for twenty minutes, adding the cinnamon near the conclusion. Strain and sweeten. Wine may be added in some cases. §

Sago Gruel.—Sago, two table-spoonfuls; water, one pint. Boil gently until it thickens, stirring frequently. Wine, sugar and nutmeg may be added, according to circumstances. §

Mutton Broth.—One pound of the scrag end of neck of mutton, two pints of water, pepper and salt, half a pound of potatoes, or some pearl

* I must enter my hearty protest against this wholesale condemnation of salt in sickness. Unsalted food has always seemed to me less easily digested, and is certainly less palatable than that which is salted. Concentrated beef soups are often salty enough from the salts of the beef used to make them; when so, additional salt is not needed. Salt soothes rather than irritates mucous membranes. Mucus, the natural soother and lubricator of these membranes, is rich in salt.

barley. Put the mutton into a stewpan, pour the water over it, pepper and salt. When it boils, skim carefully; cover the pan, and let it simmer gently for an hour. Strain it, let it get cold, and then remove all the fat. When required for use, add some pearl barley or potatoes in the following manner: Boil the potatoes, mash them very smoothly so that no lumps remain; put the potatoes into a pan, and gradually add the mutton broth, stirring it till it is well mixed and smooth; let it simmer for five minutes.¶]

Soup.—Take three or four pared potatoes, a thick slice of bread, half a tea-cupful of pearl barley or rice, a little salt and pepper, two quarts of beef tea or mutton broth. Heat the beef tea or broth in a pan, and when quite boiling add the rest of the ingredients, except the pepper and salt, which should be added when nearly done; cover the pan, and let it boil slowly for an hour. Serve with toasted bread.¶]

Sippets.—On an extremely hot plate put two or three slices of bread, and pour over them some of the juices of boiled beef, mutton or veal, if there be no butter in the dish. Sprinkle over them a little salt. §

Rabbit Soup.—Soak a rabbit in warm water, and when quite clean, cut it in pieces, and put it into a stewpan with a tea-cupful of veal stock or broth; simmer slowly till done through, then add a quart of water and boil for an hour. Then take out the rabbit, pick the meat from the bones, covering it up to keep it white; put the bones back into the liquor, and simmer for two hours, skim, strain, and let it cool. Pound up the meat in a mortar, with the yolks of two hard-boiled eggs, and the crumb of a French roll, previously soaked in milk; rub it through a tammy, and gradually add the strained liquor, and simmer for fifteen minutes. If liked *thick*, mix some arrowroot with half a pint of new milk, bring it to the boil, mix with the soup, and serve. If preferred thin, have ready some pearl barley and vermicelli boiled in milk, and add to the soup, instead of the arrowroot. Serve with little squares of toast.¶]

Arrowroot Gruel.—Arrowroot, one table-spoonful; sweet milk, half a pint; boiling water, half a pint. To be sweetened with loaf sugar. §

Chicken Water.—Take half a chicken, divested of all fat, and break the bones; add to this two quarts of water, and boil for half an hour. Season with salt. §

Calf's Foot Broth.—One calf's foot, three pints of water, one small lump of sugar, the yolk of one egg. Stew the foot in water, *very gently*, till the liquor is reduced to half; remove the scum, set it in a basin till quite cold, then take off every particle of fat. Warm up about half a pint, adding the butter and sugar, take it off the fire for a minute or two, then add the beaten yolk of the egg; keep stirring it over the fire till the mixture thickens, *but do not let it boil*, or it will be spoiled.¶]

Milk Porridge.—Wheat flour, corn meal or oat meal, two table-spoonful; milk, one pint; water, one pint; mix the flour or meal with cold water, to form a thin paste; put the milk and water over the fire and,

when they come to the boiling point, add the paste, carefully stirring. Boil at least half an hour. §

Veal Soup.—A knuckle of veal, two cow-heels, twelve pepper-corns, a glass of sherry, and two quarts of water. Stew all the ingredients in an earthen jar six hours. Do not open it till cold. When wanted for use, skim off the fat, and strain it. Heat as much as you require for use. Serve very hot.¶

Good Stock for Soup.—One pound of shin of beef, one pound of knuckle of veal, four white pepper-corns, a lump of sugar, one quart of water. Simmer gently for six hours, skim well, and strain.¶

Nourishing Soup.—Stew two ounces of the best well-washed pearl sago in a pint of water till it is quite tender and very thick, then mix it with half a pint of good boiling cream and the yolks of two fresh eggs. Blend the whole carefully with one quart of essence of beef. The beef essence must be heated separately, and mixed while both are hot. A little of this may be warmed up at a time.¶

French Milk Porridge.—Stir some oatmeal and water together; let the mixture stand to clear, and pour off the water. Then put more water to the meal, stir it well and let it stand till the next day. Strain through a fine sieve and boil the water, adding milk while so doing. The proportion of water must be small. With toast this is a good preparation for weak persons. §

Vegetable Soup.—Take one turnip, one potato, and one onion, let them be sliced and boiled in one quart of water for an hour. Add as much salt as is agreeable, and pour the whole upon a piece of dry toast. This forms an agreeable substitute for animal food, and may be given when the latter is inadmissible. §

Sago Soup.—An ounce and a half of sago, one pint of stock. Wash the sago in boiling water. Put one pint of stock on the fire, and bring it to the boil; add the sago by degrees, and simmer till it is entirely dissolved. When cold, it will form a jelly.¶

Rice Soup.—Three ounces of Patna rice, the yolks of two eggs, half a pint of cream or new milk, one quart of stock. Boil the rice in the stock, and rub half of it through a tammy, put the stock in a stewpan, add the rest of the rice whole, and simmer gently for five minutes. Have ready the cream or milk, boiled. Beat the yolk of the eggs, and mix them gradually with the cream. Take the soup off the fire, and add the cream and eggs, stirring them well together as you mix them. Heat it up gradually, but *do not let it boil*, or the eggs will curdle, and the soup be spoiled.¶

Oyster Soup.—Make a little broth of lean veal or mutton, simmer with a little celery. Strain it; put it again on the fire, and when it boils throw in the oysters with their liquor, and a trifle of pepper and salt. Serve as soon as it comes to a boil on little squares of toast. §

Thickened Milk.—With a little milk mix smooth a tablespoonful of flour and a little salt. Pour upon it a quart of boiling milk, and when it

is thoroughly mixed put all back into the saucepan, and boil up once, being careful not to burn, and stirring all the time, to keep it perfectly smooth and free from lumps. Serve with slices of dry toast. It is excellent in diarrhoe, and becomes a specific by scorching the flour before mixing with the milk. §

Semolina Soup.—Drop an ounce of semolina into one pint of boiling stock, and stir constantly to prevent burning. Simmer gently for half an hour. Season with salt to taste. Thirst in fevers can be assuaged by the use of whey, or water acidulated with currant jelly or raspberry vinegar, or a light infusion of cascarrilla, acidulated with a small quantity of muriatic acid.¶

Stewed Eels.—One eel, half a pint of strong stock, two table-spoonfuls of cream, half a glass of port wine, thickening of flour, a little cayenne. Wash and skin the eel, cut it in pieces about two inches long; pepper and salt them, lay them in a stewpan, pour over the stock, and add the wine. Stew gently for twenty-five minutes or half an hour, lift the pieces carefully on to a very hot dish, and place it by the fire, strain the gravy, stir into the cream sufficient flour to thicken it, mix with the gravy, boil for two minutes, and add a little cayenne. Pour over the eels and serve. Sometimes the addition of a little lemon-juice is gratifying to the palate.¶

Chicken and Rice.—Cut up the meat of boiled chicken. Have ready some rice well creed and seasoned with salt, put round a small flat dish or vegetable dish, warm up the chicken in a little good gravy, and serve in the middle of the dish with the rice round it.¶

PUDDINGS, &c.

Light Pudding.—Boil very smoothly in new milk one table-spoonful ground rice, let it get *quite cold*, then add two eggs, very well beaten up, a lump of white sugar, and, if liked, a dessert-spoonful of brandy. Line a small tart dish (sufficient for one person) with paste, put in the pudding, and bake quickly. Serve the moment it is ready, for it falls directly.¶

Custard Pudding.—Four eggs beaten with four table-spoonfuls of sugar, a little salt, a tea-spoonful lemon, and a little ground cinnamon; add one quart of milk; set it to bake in a moderately quick oven, and watch very carefully that it does not whey. †

Milk for Puddings or Stewed Fruit.—Boil a strip of lemon and two cloves in a pint of milk; mix half a tea-spoonful of arrowroot in a little cold milk, and add it to the boiling milk; stir it till about the consistency of cream. Have ready the yolks of three eggs, beaten up well in a little milk. Take the hot milk off the fire, and as it cools add the eggs and a table-spoonful of orange-flower water, stirring it constantly till quite cool. Keep it in a very cool place till required for use.¶

Baked Custard Pudding.—Warm half a pint of milk, or a little more; whisk two eggs, yokes and whites; pour the milk to them, stirring all

the while. Have ready a small tart dish, lined at the edges with paste ready baked. Pour the custard into the dish, grate a little nutmeg over the top, and bake it in a very slow oven for half an hour.¶

Cream for Stewed Fruit.—An ounce and a half of isinglass boiled over a slow fire in a pint and a half of water, to half a pint. Strain and sweeten, put in a glass of sherry, and stir in half a pint of good cream; stir till cold.¶

Boiled Custard Pudding.—Prepare the custard as in the foregoing recipe. Butter a small basin that will exactly hold it, put in the custard, and tie a floured cloth over it; plunge it into boiling water, turn it about for a few minutes, boil it slowly for half an hour, turn it out and serve.¶

Invalid Cup Pudding.—One table-spoonful of flour, one egg; mix with cold milk, and a pinch of salt to a batter. Boil or steam fifteen minutes in a buttered cup. Eat with sauce, fruit or plain sugar. §

Baked Bread Pudding.—Half a pint of new milk, a quarter of a pound of bread crumbs, two eggs, one ounce of butter, sugar to taste. Boil the milk, and pour it over the bread crumbs, and let them soak for half an hour. Beat the eggs, mix them with the bread crumbs, add the sugar and butter, and stir well till thoroughly mixed. Butter a breakfast cup or small pudding mould, fill it a little more than half full with the mixture, and bake in a moderate oven for about twenty minutes.¶

Sago Sauce for Boiled or Baked Pudding.—One dessert-spoonful of sago, not quite half a pint of water, one table-spoonful of sherry, one tea-spoonful of lemon-juice, and a little lemon-rind; sugar to taste.¶

Tapioca Cup Pudding.—This is very light, and delicate for invalids. An even table-spoonful of tapioca, soaked for two hours in nearly a cup of new milk. Stir into this the yolk of a fresh egg, a little sugar, a grain of salt, and bake in a cup for fifteen minutes. A little jelly may be eaten with it, if allowed, or a few fresh strawberries. §

Semolina Pudding.—One ounce of Semolina, half a pint of milk, one ounce of butter, two eggs, sugar to taste. Heat the milk, and mix with it the semolina, sugar, and butter; stir this over the fire for a few minutes; then take it off, and mix with it the eggs, which should be well beaten. Butter a small tart dish, line it with puff paste, put in the pudding, and bake in a slow oven.¶

Rice Pudding.—Two ounces of whole rice, three-quarters of a pint of milk, one ounce of butter, two eggs, sugar to taste, flavoring of lemon-peel. Let the rice swell in the milk over a slow fire, put in a few small strips of lemon-peel, stir in the butter, and then let the mixture cool. Well beat the eggs, and mix with the rice. Butter a breakfast cup or small mould, fill it three parts full, and bake. Turn it out on a white d'oyley, and serve with sauce.¶

Tapioca Pudding.—One ounce of tapioca, one pint of milk, one ounce of butter, two eggs, sugar to taste. Wash the tapioca, and let it stew gently in the milk for a quarter of an hour, stirring it now and

then. Let it cool. Mix with it the butter, sugar, and eggs, which must be well beaten; put it into a small tart dish, and give it an hour's baking in a moderate oven.¶

Vermicelli Pudding.—Two ounces of vermicelli, three-quarters of a pint of milk, quarter of a pint of cream, one ounce and a half of butter, two eggs, one ounce and a half of sugar. Boil the vermicelli in the milk till it is tender, then stir in the remaining ingredients (omitting the cream if that is not obtainable). Butter a small tart dish, line with puff paste, put in the pudding and bake.¶

Corn Bread.—Four eggs, two cups sour milk, two cups sweet milk, three table-spoonfuls sugar, one tea-spoonful soda, lard size of hen's egg, which must be melted before mixing, one tea-spoonful salt, corn-meal to make batter thin enough to pour. Bake in hot, quick oven. †

Panada.—Break up three arrowroot crackers into small pieces; pour upon them boiling water and cover close for a minute, then add a tea-spoonful of white sugar and a little milk. It is an excellent breakfast or supper for an invalid or a child. Instead of the milk, the juice of a lemon may be squeezed in and another tea-spoonful of sugar added. §

MEAT, FOWL AND FISH.

Broiled Tenderloin.—This is highly enjoyed when the patient is becoming convalescent. Cut out the round piece from the inside of a sirloin stake, broil it quick over a bright fire, turn it, with its gravy, upon a piece of freshly made toast, sprinkle with salt and pepper, but no butter; place between two hot plates, and serve directly. A tender mutton chop, or half the breast of a chicken may be served the same way, only the chicken will require longer and somewhat slower cooking. §

Minced Fowl and Egg.—Cold roast fowl, a hard boiled egg, salt, pepper, or cayenne, to taste; three table-spoonfuls of new milk or cream, half an ounce of butter, one table-spoonful of flour, a tea-spoonful of lemon-juice. Mince the fowl, and remove all skin and bones; put the bones, skin, and trimmings into a stewpan, with one small onion, if agreeable to the patient, and nearly half a pint of water; let this stew for an hour, then strain the liquor, chop the egg small, mix with the fowl, add salt and pepper, put in the gravy and other ingredients, let the whole just boil, and serve with sippets of toasted bread.¶

Restorative.—Take two calf's feet, one quart of water, and one quart of new milk; place all in a close-covered jar, and bake three hours and a half. When cold, remove the fat. Any desired flavor may be given by adding lemon peel, cinnamon, or mace, while baking. Add sugar afterwards. §

Fowl and Rice.—A quarter of a pound of rice, one pint of stock or broth, one ounce and a half of butter, minced fowl, egg, and bread crumbs. Put the rice into the cold stock or broth, let it boil very gently for half an hour, then add the butter and simmer it till quite dry and soft. When cold, make into balls, hollow out the inside and fill them with

mince; cover with rice, dip the balls into egg, sprinkle with bread crumbs, and fry a nice brown; a little cream stirred into the rice before it cools improves it very much.¶

Panada.—Take the crumb of a penny roll, and soak it in milk for half an hour, then squeeze the milk from it; have ready an equal quantity of chicken or veal, *scraped* very fine with a knife; pound the bread crumbs and meat together in a mortar. It may be cooked either mixed with veal or chicken broth, or poached like an egg, by taking it up in two tea-spoons, in pieces the shape of an egg, after seasoning it. Serve on mashed potato.¶

Plain Chicken Fricassee.—Cut up the chickens, and wash well in salt water; put them in a pot with enough cold water to cover them; add (for two chickens) half a pound of salt pork, cut up in thin strips; cover, and let heat very slowly, and then stew until the fowls are tender. Cook slowly—if they cook fast they toughen and shrink. When almost done, add, if desired, a chopped onion or two, some parsley and pepper; cover closely again, and, when heated to boiling, stir in slowly a tea-cupful of milk containing two beaten eggs and two tea-spoonfuls of flour; boil up again, and add one table-spoonful good butter. Arrange the chicken nicely in a deep dish, pour the gravy over, and serve hot. †

Baked Soup.—One pound of lean beef, one ounce of rice, pepper and salt to taste, one pint and a half of water. Cut up the meat into slices, add the rice and seasoning, place all in a jar with the water, cover it closely, and bake for four hours. Pearl barley may be substituted for rice, if preferred.¶

To Prepare an Egg for an Invalid.—Beat an egg until very light, add seasoning to the taste, then steam until thoroughly warmed through, but not hardened; this will take about two minutes. An egg prepared in this way will not distress very sensitive stomachs. †

Raw Meat.—Lean meat (beef, fowl, or mutton) minced finely, or grated, one part, and pure white sugar, two parts, thoroughly mixed in a mortar. One tea-spoonful every two, three, or four hours. ‡

Broiled Beefsteak or Chop.—Take a piece of the best steak, and beat it first with a rolling-pin—never use a sharp substance, as the back of a knife, for that will cut the fibre, while the object of the round-pin is to thoroughly soften the fibre without breaking it, thus retaining all the juice. Put the meat on a broiler and keep it over a clear fire from seven to ten minutes; if over gas, once turning is sufficient, but if over coal turn several times. Have ready a plate as hot as possible; place the steak on it, with a pinch of salt, a little pepper, and a morsel of butter. In five minutes the salt and butter will have drawn out a rich gravy, which will be delicious as well as sustaining. A chop should be cooked in exactly the same manner, except that seven minutes on the broiler will suffice. This is, of course, only suited for convalescence and chronic illness, never for acute sickness. ||

CREAMS.

Rice Cream, 1.—To a pint of new milk add a quarter of a pound of ground rice, a lump of butter the size of a walnut, a little lemon-peel, and a table-spoonful of powdered sugar. Boil them together for five minutes, then add half an ounce of isinglass which has been dissolved, and let the mixture cool. When cool, add half a pint of good cream whisked to a froth, mix altogether, and set it for a time in a very cool place, or on ice; when used, turn it out of the basin into a dish, and pour fruit juice round it, or some stewed apple or pear may be served with it.¶

Milk Toast.—This is a favorite dish with nearly all sick people when they are getting well. Cut stale baker's bread in thin slices, toast a nice brown, and lay then in a deep dish. Meanwhile boil some milk, salt to taste, and pour it over the toast, cover, and serve quick. For an invalid no butter should be put in the milk. §

Rice Cream, 2.—A quarter of a pound of whole rice, well creed in milk, and put in a sieve to drain and cool; mix with the rice a gill of good cream whisked to a froth, and add a wine-glassful of sherry, a little powdered sugar, and a tea-spoonful of lemon-juice.¶

Milk and Suet.—Chop one ounce of calves' suet very fine, tie lightly in a muslin bag, and boil slowly in a quart of new milk; sweeten with pounded loaf sugar. This is an imitation of goat's milk. ‡

Rice Milk.—Three table-spoonfuls of rice, one quart of milk, wash the rice and put into a saucepan with the milk, simmer till the rice is tender, stirring now and then, and sweeten. Tapioca, semolina, vermicelli, and macaroni, may be similarly prepared. ‡

Fruit Cream.—Apples, gooseberries, rhubarb, or any fruit. To every pint of pulp add one pint of milk or cream, sugar to taste. Prepare the fruit as for stewing, put it in a jar, with two table-spoonfuls of water, and a little good moist sugar. Set this jar in a saucepan of boiling water, and let it boil till the fruit is soft enough to mash. When done enough, beat it to a pulp, work this pulp through a colander, and to every pint stir in the above proportion of milk or cream. Of course the cream is preferable, if obtainable. Sweeten and serve in a glass dish.¶

Milk and Eggs.—Beat up a fresh egg, with a grain of salt, pour upon it a pint of boiling milk, stirring all the time. Serve hot, with or without toast. §

Italian Cream.—One pint of cream, one-half pint of milk, one cup of sugar, one cup of wine, to be whipped one-half hour; one-half box gelatine, dissolved in one-half pint of water; mix with other ingredients. Use milk in place of cream, if it cannot be obtained. †

To keep Milk from turning sour.—Fifteen grains of bicarbonate of soda to a quart of milk hinders its turning sour.¶

VEGETABLES AND FRUITS.

Rice and Apple.—Boil about three table-spoonfuls of rice in a pint and a half of new milk, and simmer, stirring it from time to time, till the rice is *quite* tender. Have ready some apples, peeled, cored, and stewed to a pulp, and sweetened with a very little loaf sugar. Put the rice round a plate, and the apple in the middle, and a little cream served with it separately, if liked.¶]

Invalid Apple Pie.—Slice up one or more nice, tart apples in a saucer, sweeten with white sugar, and cover with a moderately thick slice of bread buttered slightly on the under side. When the bread is browned, the apples, if of a tender kind and thinly sliced, will be done. §

Rice Milk.—Three table-spoonfuls of rice, one quart of milk. Wash the rice, put it into a saucepan with the milk, and simmer gently till the rice is tender, stirring it now and then to prevent the milk burning. Sweeten a little, and serve with a cut lemon, black-currant jam, or apples stewed.¶]

Rice Cakes.—Take one cup of cold, boiled rice, one pint of flour, one tea-spoonful of salt, two eggs beaten lightly, and milk enough to make this a thick batter; beat all together well and bake on a griddle. †

Apple and Rice.—Take three small apples, peel and halve them, take out the cores, put them into a stewpan with about half an ounce of butter, and strew over them a little white sifted sugar. Stew them very gently till tender, taking care not to break them. Boil the rice with the milk and a little sugar till quite soft; and when done, dish it with the apples on the top of it, and a little cream served with it separately.¶]

Rice Muffins.—Take one cup of cold, boiled rice, one pint of flour, two eggs, one quart of milk, one table-spoonful of butter, and one table-spoonful of salt; beat very hard and bake quickly. †

JELLIES, &c.

Restorative Jelly.—Take of pure isinglass, one ounce; gum arabic (powdered), one quarter ounce; sugar, two ounces; port wine, half a pint (imperial); cloves, half a dozen; half a tea-spoonful of pure lemon-juice or extract of lemon. *Directions.*—First put in a pitcher one ounce of isinglass; add to it one quarter of an ounce of gum arabic (powdered); next, two ounces of sugar, with half a tea-spoonful of lemon-juice and half a dozen of cloves. Pour over this mixture half a pint of best port wine, which should be properly measured, as bottles are not made to contain an imperial pint. Then cover the pitcher closely with brown paper, in order to retain the strength of the port wine, and set it aside for an hour to let the ingredients soak. Some persons allow the mixture to stand over night, but it is apt to lose its freshness and become musty. When the hour is up, put the pitcher into a large saucepanful of boiling water, and stir until the isinglass is completely dissolved; then allow the water to boil violently for a few

moments, and strain the jelly into a flat dish. When cold, the jelly should be cut into dice, so that it can be served to a patient and eaten by him without any exertion. Russian isinglass should be invariably preferred, although it may be made with the sheet. By taking a square of this jelly, pouring hot water over it, and allowing it to stand, it will, when cold, make a delicious drink for invalids. ||

Milk Blancmange.—Quarter of a pound of loaf sugar, one quart of milk, one ounce and a half of isinglass. Put all the ingredients into a lined saucepan, and boil gently until the isinglass is dissolved. Keep stirring it over the fire for about ten minutes. Strain it through a fine sieve into a jug, and when nearly cold pour it into an oiled mold. Turn it out carefully when required for use. ¶

Tapioca Jelly.—Tapioca, two table-spoonsful ; water, one pint. Boil gently for an hour, or until it assumes a jelly-like appearance. Add sugar, wine, and nutmeg, with lemon-juice to suit the taste of the patient and the nature of the case. §

Jelly of Irish Moss.—Irish Moss, half an ounce; fresh milk, a pint and a half. Boil down to a pint. Remove any sediment by straining, and add the proper quantity of sugar and lemon-juice, or peach-water, to give it an agreeable flavor. §

Isinglass Jelly.—Isinglass, one roll. Boil in one pint of water until it is dissolved. Strain, and add one pint of sweet milk. Put it again over the fire, and let it just boil up. Sweeten it with loaf sugar, and grate nutmeg upon it. When properly made, it resembles custard. §

Rice Blancmange.—A quarter of a pound of ground rice, two ounces of loaf sugar, one ounce of butter, one quart of milk, flavoring of lemon-peel. Mix the rice to a smooth batter with a little milk, and put the remainder into a saucepan with the butter, sugar and lemon-peel. Bring the milk to a boiling point, stir in the rice. Let it boil for ten minutes, or till it comes away from the saucepan. Grease a mold with salad oil, pour in the rice, let it get perfectly cold, and turn out. ¶

Wine Jelly.—To one and a-half boxes Cox's gelatine, one pint cold water, juice of three lemons, grated rind of two; let stand an hour, then add two pounds loaf sugar, three pints boiling water, boil five minutes; just before straining in flannel bag stir in one of pint sherry wine, six table-spoons best brandy. †

Bread Jelly.—Steep stale bread in boiling water and pass through a fine sieve while hot. It may be flavored and taken alone, or mixed and boiled with milk. ‡

Chicken Jelly.—Half a raw chicken pounded with a mallet, bones and meat together. Cold water to cover it well. Heat slowly in a covered vessel and let it simmer until the meat is in white rags, and the liquid reduced one half; strain, and press through a coarse cloth, add a little salt, return to the fire and simmer five minutes longer, skim when cool. Wine or seasoning may be added with the salt, if desirable. ‡

Arrowroot Blancmange.—Two table-spoonfuls of arrowroot, three-quarters of a pint of milk, lemon and sugar to taste. Mix the arrowroot with a little milk to a smooth batter; put the rest of the milk on the fire, and let it boil, sweeten and flavor it, stirring all the time, till it thickens sufficiently to come from the saucepan. Put it into a mold till quite cold.¶

Calf's Foot Jelly.—Take two calf's feet, and add to them one gallon of water; boil down to one quart; strain, and when cold, skim off the fat; add to this the white of six or eight eggs well beaten, a pint of wine, half a pound of loaf sugar, and the juice of four lemons, and let them be well mixed. Boil the whole for a few minutes, stirring constantly, and then strain through a flannel. The wine may be omitted or added, according to choice. §

Iceland Moss Jelly.—One handful of Iceland moss, well washed; one quart of boiling water; the juice of two lemons; one glass of wine; one quarter of a tea-spoonful of cinnamon. The moss should be soaked an hour in a little cold water, then stirred into the boiling water, and left to simmer till dissolved. Sweeten, flavor, and strain into molds. This jelly is very nourishing and is specially useful in chronic colds. ‡

Isinglass Jelly.—Isinglass, one ounce; pure gum arabic, half an ounce; white sugar-candy, one ounce; port wine, half a pint; a little nutmeg grated. These should be put in a jar to stand twelve hours, covered well to prevent evaporation, then placed in a saucepan with sufficient water to simmer till the contents are melted; the whole should be stirred, then allowed to stand to cool. A tea-spoonful is reviving in cases of extreme exhaustion. ‡

Bread Jelly.—Take the crumb of a loaf, break it up, pour boiling water over it and leave it to soak for three hours. Then strain off the water, and add fresh; place the mixture on the fire, and let it boil till it is perfectly smooth; take it out, and, after pressing out the water, flavor with anything agreeable; put it into a mold, and turn it out when required for use.¶

Blanc Mange—Excellent and Easy.—One quart of milk, one ounce gelatine, sugar to sweeten to taste; put it on the fire, and keep stirring until it is all melted, then pour it into a bowl and stir it until it is cold; season with vanilla; pour it into a mold, and put it into a cool place to stiffen. †

Arrowroot Wine Jelly.—One cup of boiling water, two tea-spoonfuls of arrowroot, two tea-spoonfuls of white sugar, one dessert-spoonful of brandy or three of wine; wet the arrowroot in a little cold water and rub smooth, then stir into the hot water, which should be on the fire and boiling at the time, with the sugar already melted in it. Stir until clear, boiling all the time, and add the wine or brandy. Wet a cup in cold water and pour the jelly in to form. A tea-spoonful of lemon-juice may replace the wine or brandy. The jelly can then be eaten with sugar and cream. ‡

Mutton Jelly.—Six shanks of mutton, three pints of water, pepper and salt to taste, half a pound of lean beef, a crust of bread toasted brown. Soak the shanks in water several hours, and scrub them well. Put the shanks, the beef and other ingredients into a saucepan with the water, and let them simmer very gently for five hours. Strain it, and when cold take off the fat. Warm up as much as is wanted at a time.¶

DRINKS.

A Very Pleasant Drink.—Put a tea-cupful of cranberries into a cup of water, and mash them. In the meantime, boil two quarts of water with one large spoonful of corn or oat meal or a bit of lemon-peel; then add the cranberries. As much fine sugar as shall leave a smart flavor of the fruit, and a wine-glassful of sherry. Boil the whole gently fifteen minutes, and strain. §

Another.—Boil an ounce and a half of tamarinds, three ounces of cranberries, and two ounces of stoned raisins, in three pints of water, till the water is reduced to two pints. Strain and add a bit of lemon-peel, which must be removed in an hour, as it gives a bitter taste, if left too long. §

Sage Tea.—Dried leaves of sage, half an ounce; boiling water, one quart. Infuse for half an hour, and strain. Add sugar and lemon juice as required by the patient. Balm and other teas are made in the same manner. The above form agreeable and useful drinks in fevers, and their diaphoretic powers may be increased by adding a little sweet spirits of nitre. §

Barley Water.—To a table-spoonful of pearl barley, washed in cold water, add two or three lumps of sugar, the rind of one lemon, and the juice of half a lemon. On these pour a quart of boiling water, and let stand for seven or eight hours. Strain it. The barley should never be used a second time. Half an ounce of isinglass may be boiled in the water.¶

Vinegar Whey.—Milk, one pint; vinegar, one table-spoonful. Boil for a few minutes, and separate the curd. §

Orange Whey.—Milk, one pint; the juice of an orange with a portion of the peel. Boil the milk; then put the orange to it, and let it stand till coagulation takes place. Strain. §

Lemonade 1.—Well rub two or three lumps of sugar on the rind of a lemon, squeeze out the juice, and add to it half a pint or a pint of cold or iced water, or better still, one or two bottles of soda-water.¶

Whey with Tamarinds.—Milk, boiling, one pint; tamarinds, two ounces. Boil them together till coagulation takes place. §

Wine Whey.—Milk, two-thirds of a pint; water, one-third of a pint; Madeira, or other wine, one gill; sugar, one dessert-spoonful. Place the milk and water together in a deep pan, and when it begins to boil pour in the wine and the sugar, stirring assiduously whilst it boils, for

twelve or fifteen minutes. Lastly, strain through a sieve. It may be drank either cold or tepid, a wine-glassful at a time. §

Effervescing Lemonade.—Squeeze two large lemons, and add a pint of spring water to the juice, and three or four lumps of white sugar. When required for use, pour half of it into a tumbler, and add half a small tea-spoonful of carbonate of soda; stir, and drink while effervescing.¶

Lemonade 2.—The juice of four lemons, the rinds of two, half a pint of sherry, four eggs, six ounces of loaf sugar, one pint and a half of boiling water. Pare the lemon-rind thinly, put it into a jug with the sugar, and pour the boiling water on it. Let it cool, and then strain it, and add the wine, lemon-juice, and eggs, previously well beaten and strained. Mix all well together, and it is ready for use.¶

Lemonade 3.—Pare the rind of three lemons as thin as possible, add one quart of boiling water and a quarter of an ounce of isinglass. Let them stand till next day covered, then squeeze the juice of eight lemons upon half a pound of lump sugar; when the sugar is dissolved, pour the lemon and water upon it, mix all well together, strain it, and it is ready for use.¶

Tamarind Whey.—Two table-spoonfuls of tamarinds stirred into a pint of boiling milk, and strained. A quarter of an ounce of cream of tartar may be similarly treated, and a little sugar-candy added. This is laxative. ‡

Milk, Rum, and Isinglass.—Dissolve in a little hot water over the fire a pinch of the best isinglass; let it cool, and mix a dessert-spoonful of rum with it in a tumbler, and fill up the glass with new milk.¶

Sherry or Brandy and Milk.—To one table-spoonful of brandy, or one wine-glassful of sherry, in a bowl or cup, add powdered sugar and a very little nutmeg to taste. Warm a breakfast-cupful of new milk, and pour it into a spouted jug; pour the contents from a height over the wine, sugar, etc. *The milk must not boil.*¶

Mulled Wine.—Boil some spice, cloves, nutmeg, cinnamon, or mace, in a little water, just to flavor the wine; then add a wine-glassful of sherry or any other wine, and some sugar, bring it to a boiling point, and serve with sippets of toast. If claret is used, it will require a good deal of sugar. The vessel for boiling the wine should be scrupulously clean.¶

Egg and Sherry.—Beat up with a fork an egg till it froths, add a lump of sugar and two table-spoonfuls of water; mix well, pour in a wine-glassful of sherry, and serve before it gets flat. Half the quantity of brandy may be used instead of sherry.¶

Milk, Egg, and Brandy.—Scald some new milk, *but do not let it boil.* It ought to be put into a saucepan of boiling water, in a jug, and scalded very gradually. When the surface looks filmy, it is sufficiently done, and should be put away in a cold place, in the same vessel. When quite cold, beat up a fresh egg, with a fork, in a tumbler, with a lump

of sugar; beat quite to a froth, add a dessert-spoonful of brandy, and fill up the tumbler with scalded milk.¶

Egg and Wine.—One egg, one table-spoonful of sugar and half a glass of cold water, one glass of sherry, and a very little grated nutmeg. Beat the egg to a froth with a table-spoonful of cold water. Make the wine and water hot, *but not boiling*; pour it on the egg, stirring all the time. Add sufficient sugar to sweeten, and a very little nutmeg. Put all into a lined saucepan, set it on a gentle fire, and stir it *one way* till it thickens, *but do not let it boil*. Serve in a glass with crisp biscuits or sippets of toast.¶

Orgeat.—Two ounces of sweet almonds blanched, and a few drops of bitter almond flavor. Pound with a little orange-flower water into a paste, and rub up with a pint of milk and a pint of water, until an emulsion is formed. Strain and sweeten. ‡

Jelly Water.—A dessert-spoonful of wild cherry or blackberry jelly; one goblet of ice-water. Beat up well. Excellent in fever as a drink. ‡

Arrowroot Drink.—Mix two tea-spoonfuls of arrowroot in about three table-spoonfuls of cold water, then pour in about half a pint of boiling water; when well mixed, add by degrees, half a pint of cold water, stirring all the time, so as to make it perfectly smooth. It should be about the consistence of cream; if too thick, a little more water may be added. Then pour in two wine-glassfuls of sherry or one of brandy, add sugar to taste, and give it to the patient in a tumbler. A lump of ice may be added, if allowed.¶

Barley Water.—Pearl barley, two ounces; boiling water, two quarts; boil to one-half and strain. A little lemon-juice and sugar may be added, if desirable. To be taken freely in inflammatory diseases. §

Rice water.—Rice, two ounces; water, two quarts; boil an hour and a half, and add sugar and nutmeg. Rice when boiled for a considerable time becomes a kind of jelly, and, mixed with milk, is an excellent diet for children. It has in some measure a constipating property, which may be increased by boiling the milk. §

Lemon Water.—Put two slices of lemon, thinly pared, into a bowl, a little bit of the peel and a little sugar. Pour in a pint of boiling water, and cover it close two hours. §

Nutritious Coffee.—Dissolve a little isinglass in water, then put half an ounce of freshly ground coffee into a saucepan with one pint of new milk, which should be nearly boiling before the coffee is added, boil both together for three minutes; clear it by pouring some of it into a cup and dashing it back again, add the isinglass, and leave it to settle on the hob for a few minutes. Beat up an egg in a breakfast-cup, and pour the coffee into it; or, if preferred, drink it without the egg.¶

Barley Coffee.—Roast one pint of common barley in the same way in which coffee is roasted. Add two large spoonfuls of this to a quart of boiling water; boil five minutes. Add a little sugar. §

Crust Coffee.—Toast slowly one or two slices of brown or white bread, pour boiling water over it, and drink hot or cold, according to preference. §

Milk and Isinglass.—Dissolve a little isinglass in water, mix it well with half a pint of milk, then boil the milk, and serve with or without eggs, as preferred. ¶

Milk and Cinnamon Drink.—Boil in one pint of new milk sufficient cinnamon to flavor it pleasantly, and sweeten with white sugar. This may be taken cold with a teaspoonful of brandy, and is very good in cases of diarrhoea. Children may take it, milk-warm, without the brandy. ¶

Demulcent Drink.—Take a pinch of isinglass, and boil it in half a pint of new milk, with half a dozen bruised sweet almonds and three lumps of sugar. ¶

Arrowroot and Black-Currant Drink.—Take two large spoonfuls of black-currant preserve, boil it in a quart of water, cover it, and stew gently for half an hour, then strain it, and set the liquor again on the fire; then mix a tea-spoonful of arrowroot in cold water, and pour the boiling liquor upon it, stirring meanwhile; then let it get quite cold. ¶

White Wine Whey.—To half a pint of boiling milk add one or two wine-glassfuls of sherry; strain through a fine sieve, sweeten with sifted sugar, and serve. ¶

Barley Water.—Wash two ounces of pearl barley with cold water, then boil for five minutes in some fresh water and throw both waters away. Then pour on a pint and a half of boiling water and boil down one-half. Flavor with thinly cut lemon-rind and add sugar to taste. A little isinglass may be added if desired. ‡

Caudle.—Beat up an egg to a froth, add a wine-glassful of sherry, and half a pint of gruel, flavor with lemon-peel and nutmeg, and sweeten to taste. ¶

Another Caudle.—Mix well together one pint of cold gruel with a wine-glassful of good cream, add a wine-glassful of sherry and a table-spoonful of noyau, and sweeten with sugar-candy. ¶

Egg and Brandy.—Beat up three eggs to a froth in four ounces of cold spring water, and pour in four ounces of brandy, stirring all the time. A portion of this may be given at a time. ¶

Milk and Gelatine or Isinglass.—Half an ounce of gelatine to be dissolved in half a pint of hot barley water; an ounce of powdered loaf sugar added, and a pint of new cow's milk poured in, makes an imitation of asses' milk. Dissolve a little isinglass in water, mix well with half a pint of new milk, boil, and add sugar or not as desired. ‡

Rice Water.—One ounce of well-washed Carolina rice. Macerate for three hours at a gentle heat in a quart of water, and then boil slowly for an hour and strain. It may be sweetened and flavored with a little

lemon-peel. Useful in diarrhoea, &c., when the flavoring is best dispensed with, and a little Cognac added. ‡

Beef Tea and Cream Enema.—Mix four or five ounces of strong beef tea, one ounce of cream, and half an ounce of brandy or one ounce of port wine. ¶

Apple Water.—Roast two tart apples until they are soft; put them in a pitcher, pour upon them a pint of cold water, and let it stand in a cool place an hour. It is used in fevers and eruptive diseases, and does not require sweetening. §

A Refreshing Drink in Fevers.—Put a little sage, two sprigs of balm, and a little sorrel into a stone jar, having first washed and dried them. Peel thin a small lemon, slice it, and put a small piece of the peel in; then pour in three pints of boiling water. Sweeten, and cover it close. §—[This must never be used in kidney disease of any kind. κ.]

INDEX.

A.

Acid steam-bath, Dr. Nevin's, 38.
Air, motion of, in room, 2.
Ammonia for blistering, 43.
Anodyne plasters, 43.
Arrangement of room, 13.
Arrowroot, 63.
Arterial Hæmorrhage, 53.

B.

Baking, 54-56.
Baths, 28-41.
 Classification of, 29.
 General Hot Bath, 29, 31.
 Hot Foot Bath, 29, 31.
 Cold Foot Bath, 29, 31, 32.
 Hip or Sitz Bath, 29, 32.
 Sponge Bath, 17, 29, 32.
 General Cold Bath, 29, 33.
 Sea Salt Bath, 29, 34.
 Medicated Baths, 33.
 Douche, 29, 34.
 Shower Bath, 29, 35.
 Cold and Hot Pack, 29, 35, 36.
 Vapor Bath, 29, 36, 39.
 Hot Air Bath, 38.
 Electric Bath, 39.
Beaumont, Dr., experiments of, 58.
Beds, 14.
Bedding, 16, 17.
Bed pans, 20.
Bed sores, 17.
Bed table, 59, 60.
Belladonna plasters, 43.

Belladonna fomentations, 46.
Beef, 53, 64.
Beef extracts, 65.
Beef tea, 55.
Beef, powdered, 65.
Bleeding, how to stop, 52.
Blisters, 43.
Blood, injections of, 49.
Bottles, specially for poisons, 35.
Boiling, 54, 57.
Bread, 63.
Bread and milk poultice, 40.
Broiling, 54, 56.

C.

Carpets, 13.
Castor oil injections, 47.
Chamomile fomentation, 46.
Changes of bedding, 16.
Charcoal poultices, 41.
Childbirth, articles needed at, 52.
Chicken soup, 56.
Colds, how broken by baths, 30.
Cold feet, treatment of, 32.
Cold bath, 33.
Cold sponging, 17, 32.
Cold pack, 29, 35.
Congestion of kidneys, 42.
Congestion, hypostatic, 25.
Contagion, 23.
Convalescents, diet of, 62.
Cooking, methods of, 54.
Corn meal poultice, 40.
Croup, 37, 45.

Croup-kettle, 45.
 Cubic contents of sick-room, 1.
 Cups, wet and dry, 43.
 Curtains, 13.

D.

Defibrinated blood, injections of, 49.
 Diet for the sick, 54.
 Diet for convalescents, 62.
 Diphtheria, 45.
 Disinfection, rules for, 27.
 Douche, the, 34.
 Draw-sheet, 15.
 Drinking ducks, 18.
 Drinks in fever, 25.
 Droppers, 18.
 Dry cups, 43.
 Dusting, 13.

E.

Ears, care of, 50, 51.
 Earth closets, 24.
 Eggs, 62.
 Electric-bath, 39.
 Enemas, 47.
 Eruptive fevers, pack in, 36.

F.

Fats, 58.
 False croup, cold sponging in, 32.
 Felons, 40.
 Fever, 21.
 Fever drinks, 25.
 Fever thermometer, 21.
 Fish, 65, 66.
 Flannel for joints, 45, 46.
 Fluid foods, objections to, 55.
 Flowers in sick-room, 14.
 Flaxseed-meal poultice, 40.
 Fomentations, 46.
 Fountain syringe, 51.
 Foot-bath, 31, 32.
 Fruit, 64.
 Frying, 54.

G.

Glycerine in poultices, 41.
 Graves' fever drink, 26.

H.

Hæmorrhage, how to stop, 53.
 Hip-bath, 32.
 Hop fomentation, 46.
 Hot pack, 35, 36.
 Hot air bath, 38.
 Hot foot-bath, 31.
 How to serve food, 59.
 Hypostatic congestion, 25.

I.

Inflammation of kidneys, 42.
 Infusing, 54, 55.
 Infection, 23.
 Ingredients of baths, 40.
 Injections, 47, 53.
 Irritant plasters, 42.

J.

Joints, how to swathe, 45, 46.

K.

Kidneys, congestion of, 42.
 Kidneys, inflammation of, 42.
 Kidney disease, baths in, 37.

L.

Leeches, 44.
 Light, 12.
 Linseed-meal poultice, 40.
 Linen, bed and body, how to change, 16.
 List slippers, 13.
 Litmus paper, 23.
 Liquid beef injections, 49.
 Low ceilings, 1.

M.

Martin, Sir J. Ranald, on food, 60, 61.
 " " " " ventilation, 10, 11.
 Massage, 47.
 Mattresses, 14.
 Meats, 64.
 Meat injections, 49.
 Mechanical plasters, 43.
 Medicated baths, 33.
 " poultices, 41.
 " enemas, 48.

Methods of cooking, 54.
Milk, 62.
Motion of air in room, 10.
Mustard plasters, 42.
Mutton, 56, 64.

N.

Nasal injections, 51.
Nevin's acid steam-bath, 38.
Nightingale, Miss, on cooking, 61.
Night crowing of infants, 32.
Nitric acid for tests, 23.
Noises from street, 1.
Nutritive injections, 50.
Nurses, rules for, 24.

O.

Odors in room, 17.
Oil-silk jacket, 46.
Onion poultice, 41.
Oysters, 56.

P.

Pack, hot and cold, 35, 36.
Parlor beds, 16.
Parker, Prof. Willard, on fresh air, 10.
Perfuming room, 17.
Physician's orders, 23.
Pictures in room, 14.
Plants in room, 14.
Plasters, 42, 43.
Pleurisy, 30.
Pneumonia, 30.
Poultices, 40, 42.
Poppy fomentation, 46.
Powdered beef, 65.
Proportions of bath ingredients, 40.
Protective plasters, 43.
Pulse, 22.
Purgative enemas, 47.

Q.

Quantity of bed-clothes, 17.

R.

Reading to patients, 24.
Reaction of urine, 23.
Recipes, 66.

Relative digestibility of foods, 58, 59.
Roasting, 54.
Rules for disinfecting, 27.

S.

Scarlet fever, pack in, 36.
Scarifier for wet-cupping, 44.
Seasalt baths, 34.
Seat-worms, treatment of, 49.
Shower-bath, 35.
Sheet, draw, 13.
Sick-room, situation of, 1.
Sick, the diet of, 54.
Sitz-bath, hot and cold, 32.
Slippers, list, 13.
Slippery elm poultice, 40.
Sloughing from cantharides, 42.
Soap injections, 47.
Soap-and-sugar poultice, 40.
Special bottles for poisons, 35.
Spanish-fly plasters, 42.
Spit cups, 20.
Sponge-bath, 17, 32, 36.
Spoons for giving medicine, 19.
Steam atomizer, 45.
Stewing, 54, 57.
Stramonium plaster, 43.
Street, noises from, 1.
St. Martin, experiments on, 58.
Sunshine, Martin on, 12.
Sun-bath, 12.
Surgical dressings, 52.
Suppression of urine, from Spanish-fly plaster, 42.
Suppression of urine, hot baths in, 32.
Surgeon's plaster, 43.
Swansdown plaster, 43.
Sweating feet, treatment of, 32.
Sweating, how to hasten in bath, 29.

T.

Tables of relative digestibility of foods, 58, 59.
Temperature of room, 11.
" " sick person, 21.
Test tubes, 23.
Thermometer, fever, 21.
Thirst, 25.
Thread-worms, injections for, 49.

Throat, swabbing of, 47.
Tobacco poultice, 41.
Turpentine injections, 47.

U.

Urine, reaction of, 23.
Urine, suppression of, 32, 42.
Urinals, rubber, 20.

V.

Vapor-baths, 36-39.
Vaseline, 17.

Venous hemorrhage, 53.
Ventilation, 1, 2.
Visitors, 26.

W.

Water, as an air purifier, 14.
Wet cups, 43.
Whispering, 17.
Wild fowl, 56.

Y.

Yeast poultice, 42.

THIS CUT SHOWS BUT ONE OF THE MANY POSITIONS OF
The Marks Improved Adjustable Folding Chair,
 SUPERIOR TO ALL OTHERS, AND COMBINING IN ONE A

PARLOR, LIBRARY,
 SMOKING, or
 INVALID'S CHAIR.



LOUNGE,
 BED, or
 CHILD'S CRIB.

Easily Adjusted to any Position Desired for Ease or Comfort.

Universally acknowledged to be the Most Desirable and Complete Article of Furniture ever produced.

Fully warranted as represented, and satisfaction guaranteed.
 Call and examine, or send stamp for illustrated Catalogue to

MARKS A. F. CHAIR CO., Limited,
 850 BROADWAY, NEW YORK.

SOLE PROPRIETORS AND MANUFACTURERS.

OUR SELF-PROPELLING WHEEL CHAIR IS SUPERIOR TO ALL OTHERS.

We also manufacture the **MOST COMPLETE OPERATING CHAIR** for use of Physicians and Surgeons.

WARMING AND VENTILATION. **Fire on the Hearth,**

BEST NURSERY STOVE IN THE WORLD, COMBINING, IN ONE APPARATUS, AN OPEN FIRE, CLOSE STOVE, and WARM AIR FURNACE.

MEDALS AWARDED :

U. S. Centennial, 1876, Paris Exposition, 1878, and many State and County Societies.

"For all rooms requiring independent warmers, 'THE FIRE ON THE HEARTH' is the greatest improvement of modern times."—Dr. A. N. BELL, Editor of *The Sanitarian*. Sept. 1875.

"We have tried this stove and found it satisfactory, both as a heater and a ventilator."—EDITOR'S TABLE, *Popular Science Monthly*, Nov., 1879.

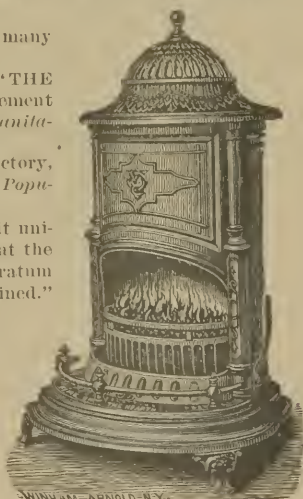
"It is easy to heat an apartment, but to warm it uniformly by an inexpensive contrivance that secures at the same time an abundant supply of fresh air, is a desideratum that has not, that I am aware of, been previously attained."
 —By PROF. E. L. YOUMANS.

Special attention paid to the warming and ventilation of School and Lecture Rooms.

Send for descriptive matter to the

Open Stove Ventilating Co.,

78 Beekman St., New York.



HORLICK'S FOOD!

For Infants, Dyspeptics, and Invalids,

A Perfect Substitute for Mother's Milk.

BARON LIEBIG, the greatest authority on Infant Diet, states that the majority of children who die under one year of age, do so from the effects of improper food, or from improper administration of the food.

A concentrated extract, prepared according to the formula of BARON LIEBIG, and recommended by the highest medical authorities as the best food for

INFANTS, DYSPEPTICS AND INVALIDS.

CONTAINS NO STARCH.

It is well known by physicians that infants cannot digest starch until they have their teeth, as until that period they do not possess the special ferment "Ptyaline" which is necessary for the digestion of starchy foods. Mother's milk contains no starch, but milk sugar, which is transformed by the acids of the stomach into grape sugar. Whenever infants cannot be fed by breast milk, it is easy to help nature by giving

HORLICK'S FOOD

which is prepared from malt and wheaten flour, the malt (which contains vegetable diastase) so acting upon the flour as to transform it into dextrine and grape sugar. It also differs from other foods in being alkaline instead of acid.

Mothers nursing will find great benefit by taking this Food themselves, as it greatly increases the quantity and quality of the milk, or it may be given to the child alternately with the breast milk, when the latter is deficient.

Horlick's Food is in the form of a dry extract, perfectly soluble, and entirely free from bran and husks, and will be found on trial to be not only the best food for infants and invalids, but also the cheapest, as through their increased sales the proprietors have reduced their price 25 per cent. to bring it within the reach of all.

Price, 75 Cents per Bottle.


Trial Size, 40 Cents.

For samples, pamphlets and particular information apply to

OSCAR KRESS, Druggist,

Wholesale and Retail Agent,

1670 Broadway, Cor. 52d St., NEW YORK.

 *The large bottles contain 18 ounces, which is nearly double the quantity usually furnished by other foods for \$1.00.*

IMPURE WATER IS DANGEROUS.

The best medical authority pronounces impure water a fruitful cause of many diseases. Typhoid fever and all low types of fevers, Kidney diseases, Stone in the bladder, Rheumatism and all Malarial diseases. *Malaria entering the system through water is even worse than malarial atmosphere.*

GRANT'S REVOLVING & SELF-CLEANSING FILTER, Purifies Water Thoroughly.

Patented April 1st, 1879.

The handle of the Filter should not be changed when the faucet is open.

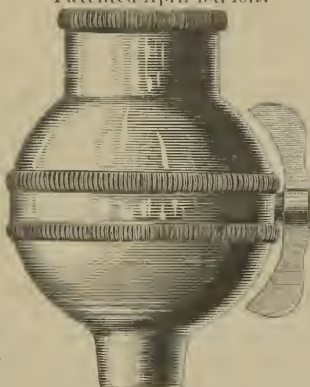
To filter the water, place the handle horizontal.

To cleanse the filter, reverse the handle.

To obtain full flow of water without filtering, place the handle upright.

The charcoal in this filter can be replenished at any time by removing the wire spring and sieve.

A box of Charcoal and new Sieves for this Filter cost 10 cents.



OUTSIDE VIEW.

Any Filter not Easily
Cleansed is worse
than none.

Grant's Filter is easily and instantly cleansed.

Grant's Filter breaks the force of water, thereby giving thorough filtration.

Grant's Filter gives you a full supply of water without removing it from your faucet.

Grant's Filter is a public benefaction.

GRANT'S FILTER IS THE BEST IN THE WORLD, Endorsed by the Medical Profession,

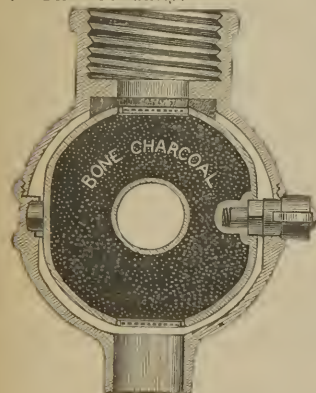
And the only Filter that can be thoroughly cleansed.

All Filters Warranted.

Use no Other.

Cleanliness is Health.

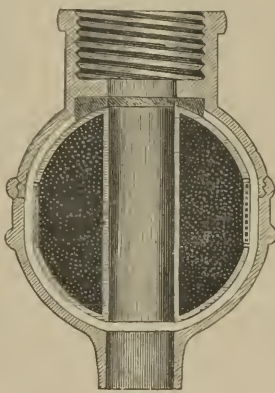
This Round Ball is revolved by the handle on the outside of the shell and cleanses the Filter instantly.



FOR FILTERED WATER.

The construction of this Ball is such that the force of the water is broken and made to percolate through the entire body of filtering material in four different streams, thereby securing perfect filtration.

Bone Charcoal is acknowledged to be the best Filtering material known, removing foul gases, articles held in solution or suspension, such as decomposed animal and vegetable matter so abundant in all Hydrant water.



FOR UNFILTERED WATER.

No Household can afford to be without this Filter.

We manufacture Filters all sizes for manufacturing purposes, such as
Soda Water Fountains, Mineral Water Fountains, Paper Manufactories,
Beer Breweries, Ale Breweries, Cotton Mills,
Cotton Bleacheries, Steam Boilers, Steamboats, etc., etc.

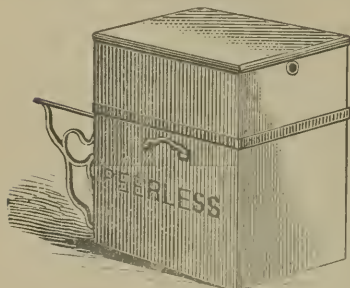
Price, \$2.00 and \$3.00.

CLINTON E. PAGE, Manager,

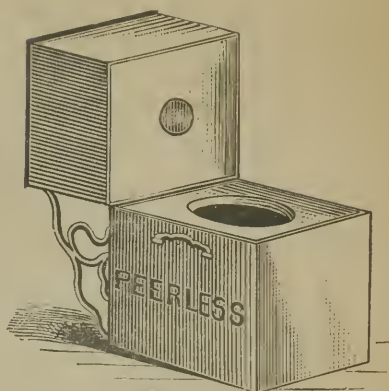
11 East 14th St., New York.

The Peerless Earth Closet.

21 $\frac{3}{4}$ inch High.
15 $\frac{1}{2}$ inch Long.
15 $\frac{1}{2}$ inch Wide.
Height of Seat, 14 inches.



Closet Closed.



Closet Open.

DRY SIFTED EARTH, COAL ASHES, PEAT DUST, CHARCOAL DUST, OR ANYTHING THAT HAS DEODORIZING PROPERTIES CAN BE USED IN THIS CLOSET.

The above cut represents an article long needed in every family, especially for ladies, children and the sick room.

It consists of a Wood Case with a Galvanized Iron Pail in bottom part. The Cover or Top being used as an Earth Reservoir, holding enough earth for 20 times usage of closet.

The simple opening of Top exposes the Seat for use, and at same time fills Earth Chamber from Earth Reservoir: by closing down top, after using the closet, the earth is distributed from Earth Chamber into Pail. Every time the top is lifted, Earth Chamber is filled, and same distributed when closed.

No machinery to get out of order. It is Simple, Practical, Durable and completely answers the purpose.

This little closet is invaluable in cases of sickness. If the Excrement is unusually offensive or Disease Contagious, any dry disinfectant can be mixed with the earth or whatever is used in the Reservoir, thus disinfecting the Pail and Closet, and preventing contagion.

Prices:	{	Pine, Stained and Varnished	\$7 00
		Ash, Black Walnut, trimmed	8 50
		Black Walnut	10 00

ADDRESS,

HENRY H. B. BLOOMFIELD,

34 Dey Street, New York.

Also, WAKEFIELD AND PERFECTION EARTH CLOSETS.

"If we would have Health we must use soap."—ERASMUS WILSON, F. R. S., F. R. C. S.

A Perfect Skin Soap.

"Whoever wishes to preserve the skin in good order, and particularly if troubled with a tender, chapped, irritable state of this organ, must attend sedulously to the use of two things: a proper soap and a proper kind of bath. A good soap cannot be very cheap. Pungent scent is in no way necessarily connected with good soap."—*J. L. Milton, Senior Surgeon to St. John's Hospital for Skin Diseases, London.*

"A majority of brands, yielding the highest perfume and commanding the highest prices, are not only inefficacious but absolutely pernicious when applied to the skin—even in health."—*L. D. Bulkley, M. D., Physician to Skin Dep'ts Demill Dispensary and New York Hospital.*

"In many skin diseases the attending physician finds his prescribed remedies of comparatively little avail, without understanding why; the fact being that the patient is daily applying a poison to the skin in the shape of soaps made with impure fats."—*Journal of Applied Chemistry.*

"The future health of the infant depends to a great extent upon the manner and method of its first washing. During our practice we have met with a large number of cases of the severest kind affecting both the skin and eyes, and lasting for years, owing to the use of irritating or poisonous soaps."—*Dr. Newton.*

"I have made a careful examination of the samples of Packer's Tar Soap submitted to me for analysis, and find that it is composed of pure vegetable oil, glycerine, and refined pine tar, combined by a process which others have tried but failed. I consider it the best soap for all purposes mentioned in your circular, which I have ever used or examined."—*W. A. Wetherbee, M. D., Prof. of Chemistry and Toxicology, 224 E. 14th St., New York.*

"I advise all my patients to use Packer's Tar Soap exclusively; three years' personal experience has convinced me that it is by far the best soap in the market."—*Edward Sutton Smith, M. D., 20 Irving Place, New York.*

"I am much pleased with the results obtained from Packer's Tar Soap. I have used it very extensively in my practice in almost all varieties of skin disease—but have especially found it useful in Chronic Eczema and Psoriasis, also in Puriago."—*Francis W. Campbell, M. D., Prof. of Physiology, Bishop's University, Attending Physician Women's Hospital, etc., Montreal.*

"It is the best article I have ever used in cases of skin diseases, whether suppurative or not. For infants' use it is invaluable."—*Edward Barnes, M. D., Pleasant Plains, New York.*

"The thanks of the profession are due to the Packer Manufacturing Company for giving us in their tar soap an elegant article for the toilet, in which the well known soothing and healing properties of Pine Tar are so skillfully combined with vegetable oils. In all cases of skin disease, where tar is indicated this soap will be found invaluable; and as an article for the toilet, vastly superior to the highly perfumed soaps so much in use."—*The Homoeopathic Times.*

PACKER'S TAR SOAP is sold by Druggists. Price, 25 cents per cake. Descriptive Pamphlet sent on application, postpaid.

Address
P. O. Box 2985.

THE PACKER MFG. CO.,
NEW YORK.

THE NATIONAL PRINTING CO.,

16-22 CHAMBERS ST., NEW YORK,

Book, Job and Newspaper Printing,

ADDRESS CARDS.

BUSINESS CARDS.

VISITING CARDS.

WEDDING CARDS.

WEDDING NOTICES.

NOTICES.

INVITATIONS.

PROGRAMMES.

ORDERS OF DANCING.

ENVELOPES.

FINE MERCANTILE & ORNAMENTAL PRINTING.

